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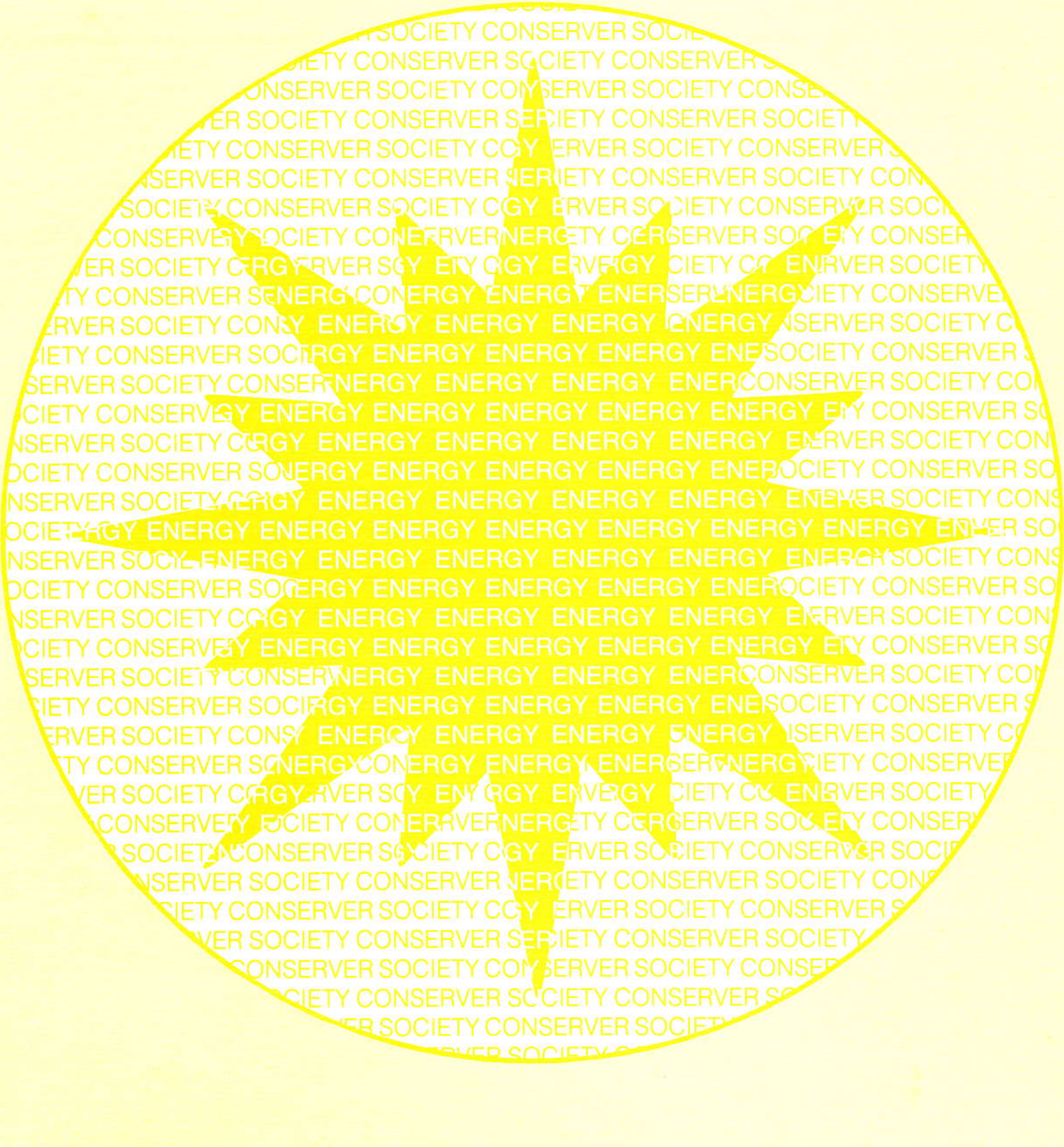
CONSERVER SOCIETY
ENERGY

CHEA Awards Available

1981-1982 Academic Year

The Canadian Home Economics Association announces the following awards available to home economists for the 1981-1982 academic year.

THE MARY A. CLARKE MEMORIAL SCHOLARSHIP

$2,000

This scholarship was established as a tribute to Mary Clarke, a valued member of the Canadian Home Economics Association and President from 1952 - 1954.

For a graduate in Home Economics from a Canadian University who is a resident of Canada and who is planning to undertake, or who at present is engaged in, graduate study proceeding to a higher degree. The award will be based on scholarship, personal qualities, past and/or potential contributions to the profession of Home Economics, and financial considerations.

Canadian Home Economics Association Scholarship Fund Award

THE 1980 CARNATION COMPANY INCENTIVE AWARD

$500

This award will be presented to a graduate in Home Economics, or in a closely allied discipline, from a Canadian University who is planning to undertake graduate study proceeding to a higher degree. Special consideration will be given to a student undertaking post graduate study in foods or food science. The award will be made on the basis of academic achievement, personal qualities, financial need and an intended career in the food industry.

Presented by the Carnation Company Limited

THE SILVER JUBILEE SCHOLARSHIP

$2,000

The Silver Jubilee Scholarship was established to commemorate the twenty-fifth anniversary of the founding of the Canadian Home Economics Association.

For a graduate in Home Economics from a Canadian University who is a resident of Canada and who is planning to undertake, or who at present is engaged in, graduate study proceeding to a higher academic degree. The award will be based on scholarship, personal qualities, past and/or potential contributions to the profession of Home Economics, and financial considerations.

Canadian Home Economics Association Scholarship Fund Award

THE RUTH BINNIE SCHOLARSHIP

2 AWARDS — $3,500 EACH

This scholarship was established through the generosity of the late Ruth Binnie, Halifax, Nova Scotia, to promote and encourage the quality of Home Economics education in Canada.

For a graduate in the field of Home Economics or Home Economics Education, holder of a professional teaching certificate, who is a resident of Canada. First consideration will be given to applicants proceeding towards a Master's degree in Education on a full-time basis. Second consideration will go to part-time students with scholarship monies being prorated. Third consideration will go to Ph.D. applicants planning a career in Home Economics Education. The candidate must have a high commitment to teaching and to the profession, one who will follow the principles and practice of Home Economics Education in teaching junior or senior high school students. The award will be based on scholarship, personal qualities, contributions toward Home Economics Education in junior and/or senior high school and potential in the education field.

Canadian Home Economics Association
Ruth Binnie Scholarship Award

APPLICATION FORMS AVAILABLE FROM:

Chairman
Awards Selection Committee
Canadian Home Economics Association
151 Slater Street, Suite 203
Ottawa, Ontario
K1P 5H3

TO BE ELIGIBLE, APPLICATIONS MUST BE POSTMARKED NO LATER THAN DECEMBER 31, 1980.

Canadian
Home Economics
Journal

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d'Economie Familiale

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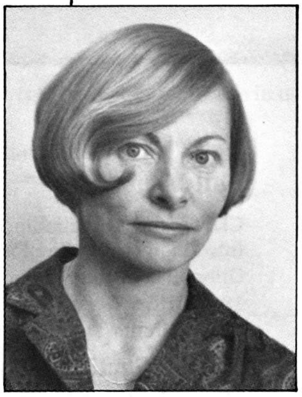
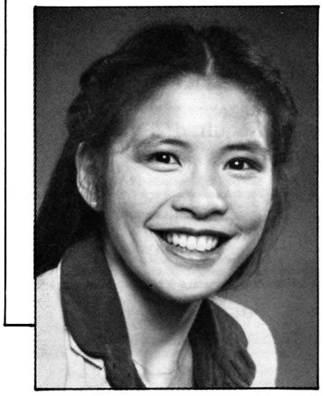
Published quarterly
Canadian Home Economics
Association
L'Association Canadienne
d'Economie Familiale

Introducing Our New Executive



May Maskow, President, has recently left her post as Chairman of the Food Nutrition, Consumer and Family Studies Department of Ryerson Polytechnical Institute, Toronto. Presently she is enjoying her new work as Consultant in the areas of food, nutrition and gerontology in Toronto.

Included among her many professional activities is membership in the Canadian Food Service Executive Association, the Canadian Institute of Food Science and Technology, the Institute of Food Technology, the Society for Nutrition Education and the Toronto Home Economics Association of which she is a past-president. She is very interested in nutrition in third world countries having spent a sabbatical leave in Latin America.



Marg Murray, Secretary, graduated from the College of Family and Consumer Studies, University of Guelph in 1975. After working as a Home Economist for three years with the Beef Information Centre, the consumer arm of the Canadian Cattlemen's Association, she was appointed the Consumer Consultant for Ontario for Robin Hood Multifoods Limited. Linda is currently a freelance Food and Public Relations Consultant resident in Walkerton, Ontario. She has been Membership Chairman of Toronto Home Economics Association.

Ellen Boynton is continuing as **Treasurer** and Finance Chairman for a second two-year term. As it takes some time to understand the financial aspects of CHEA, she feels that a second term will be valuable to the Association. We have been fortunate to have Ellen's input and constant inferface with the staff in the Ottawa office during the recent staff changes.

Ellen has had several years' experience with the Ottawa Home Economics Association, including the presidency. She is active in community activities and has a small dressmaking business. She hopes to see CHEA membership grow and move out of the deficit budgetting situation in the next two years.

Linda McKay, Vice-President, has been an associate professor since 1968 in the Department of Home Economics at the University of Windsor, where she teaches textiles and clothing.

She is a past-president of the Apparel Studies Association of Canada and presently edits its Newsletter. A member of the Windsor Public Library Board and the Ontario Library Trustees Association, she has also served on various committees of the Canadian Federation of University Women. She is a past chairman of the University of Windsor Committee on Status of Women Academics. Linda is listed in the World's Who's Who of Women in Education.

Dilemmas of the Future

Perhaps no profession is more affected by social, economic, and technological change than is home economics for changes in these areas directly affect the lives of families we serve and the decisions they make. At the successful Saskatoon Conference this past summer technological change and the affect it is having on our work and on our profession was the focus. One could not help but be made aware that the rapidity of this change is rather staggering. To look at it another way, any society that can change the focus of its marketplace from efficient consumerism to conscious conservism in less than a decade will pose some interesting dilemmas for those who educate in family decision making.

The aim of our profession as stated in our constitution is to improve the quality of home and family in Canada. Yet as the various structures which give form and function to family life change rapidly, it is difficult to maintain some fairly specific functions we perform and to delineate our role in them.

Where does our service to clients, our research, our area of expertise begin and end? How far must we go in becoming computer experts, marketplace researchers, or family sociologists (the age of specialization!) yet function as home economists? These are not easy questions and there is no simple prescription for answers.

As a professional association, however, we must be prepared to deal with these dilemmas of the future. We must carefully prescribe some limits to our aim, some direction to our mission, and some focus to our discipline. And clearly if home economics is to remain relevant in Canada this association must have the courage to deal squarely with these issues. We might begin for example by giving guidelines to post secondary institutions who are training the future members of our profession as to what are the basic educational requirements of a home economist. We must also make decisions regarding registration, regarding professional ethics, regarding continuing education.

The Professional Development Committee is compiling a report which will touch on all of these areas and will serve as a focus for serious discussion, deliberation and decision as we map a pathway through the future. Brown and Paolucci have done some significant thinking to lead the United States in this regard. The title of their paper "Home Economics Defined" is significant.

As we head into the future it is important that we define and redefine our objectives, our mission, and our modus operandi so that we remain relevant through constant change. At the First Global Conference on the Future held in Toronto this past July futurist philosophy of self fulfilling prophesy was reiterated. Futurists believe that this element is so strong in human nature that it bides well for all of us on Earth to prophesy positive futures.

The message for our profession is clear. As we are engulfed with escalating societal, economic, and technological change we must predict how, what, where, and even why we will be in the future. We must be specific when we define our goals and we must describe and map out how we plan to get there. This I believe is our challenge for the 80's. ●

President's Message

May Maskow

1980 CHEA Award Winners

Barbara Lee Nelson

Silver Jubilee Award

The recipient of the Silver Jubilee Award, Barbara Nelson is planning to work on a Ph.D. in Education at Cornell University in New York State. She is majoring in Home Economics Education with minors in Program Evaluation and Research and Family Studies. She is currently on a half-year sabbatical from the University of Manitoba where, as an Assistant Professor, she teaches in Home Economics Education. She has had experience as a teacher in Manitoba, Alberta and Washington. She holds a Bachelor's degree in Home Economics Education from Washington State University, a Bachelor's degree in Education from the University of Alberta and a Master's degree in Education from Cornell.

Barbara is a member of the Manitoba Home Economics Association, the Manitoba Home Economics Teachers Association and the Canadian Home Economics Association.

Mary A. Clarke Memorial Scholarship

Judith Marshall, the recepient of the Mary A. Clarke Award, is proceeding toward a Ph.D. in Business Administration and Marketing at the University of Western Ontario. She is a graduate of the University of Manitoba and holds both a Bachelor's and a Master's degree from there. She is currently an Assistant Professor in the Division of Family Studies, Faculty of Home Economics at the University of Alberta where she teaches Management and Consumer Studies. She has selected the field of Marketing for her advanced degree because in her words "my academic interests and teaching responsibilities focus on the family as a consuming unit — examining how consumer decisions are made, what influences these decisions and on analyzing interactions between consumers, business and government in the market place". Judith has been granted a three year leave of absence from the University of Alberta.

She is a member of the Edmonton Area Home Economics Association, the Alberta Home Economics Association and the Canadian Home Economics Association. As a member of the latter she served on the Consumer Economics and Management Committee. Many home economists will remember her as a participant in the program of the Calgary Conference in 1978.

Judith Joy Marshall

Carnation Incentive Award

Lynn Roles, the winner of the 1980 Carnation Incentive Award graduated from the University of Alberta in 1978 with distinction. She completed a Dietetic Internship at the Royal Alexandra Hospital in Edmonton in September 1979 and she is currently enrolled in a Master's degree program at the University of Alberta. Lynn's special interest for her Master's degree will be a study of new quick chill methods currently being introduced into food service institutions. Sensory and objective methods will be used to determine the suitability of this new method.

Lynn Mary Roles

Lynn is currently a member of the Canadian Dietetic Association, the Alberta Registered Dietitians' Association and was formerly a member of the Canadian Home Economics Association. She is interested in pursuing a career in which she can work toward an improvement in the quality of food in food service institutions.

No Ruth Binnie Scholarship was awarded this year as no applicant met the terms of reference.

CHEA Grants Two Honor Awards

There were two worthy recipients of the CHEA Honor Awards this year — Wanda Young and Wendy Sanford. The Award is presented by the Association to honor a member for outstanding leadership and service to the Association and/or profession of home economics.

WENDY SANFORD graduated in 1956 with a Bachelor of Science in Home Economics from the University of Alberta. After interning at the Montreal General Hospital she worked as a dietitian for several years at hospitals in Hamilton and Edmonton. For the past 20 years, Wendy has been with Corning Canada Inc. in the position of Manager, Home Economics.

Wendy has been a devoted member of the Toronto Home Economics Association for many years acting on the Board of Directors and assisting in many other ways. Nationally, Wendy has chaired both the CHEA Public Relations Committee and the Home Economists in Business Section, giving effective leadership. A major contribution she has made to the profession has been her involvement and commitment to the changeover to metric. Wendy was a founding member of Sector 9.50 in 1974 and was the chairman from 1975-1979. She still represents CHEA on that committee as well as on Steering Committee 9. Through Wendy's efforts, metric conversion has progressed and CHEA has benefited from an increased credibility with people in the private sector with whom she has dealt.

Through her leadership and personal devotion to the profession, Wendy has created a positive image and awareness of home economics among consumers and students alike. Her opinions and advice are both respected and sought.

Noreen Bennett presented the Honor Award to Wendy on behalf of CHEA.

WANDA YOUNG, has been dedicated over the years to her profession and her professional associations. She has held many executive positions, including that of president, with the Regina, Saskatoon and Saskatchewan Home Economic Associations. Her work in CHEA has spanned many years and includes holding offices of president, chairman of the Professional Development Committee and Awards Committee and liaison to the International Federation of Home Economics as well as being a vice-president of that organization.

Wanda was born in the United States but has lived most of her life in Saskatchewan where she graduated with distinction from the University of Saskatchewan with a Bachelor of Home Science degree in 1943. She subsequently held teaching positions in British Columbia, Alberta, Saskatchewan and Devonshire. In 1957 Wanda completed her Master of Arts degree at Columbia University and in 1977, a Doctor of Philosophy degree from Michigan State University. Presently she is a professor with the College of Home Economics, University of Saskatchewan where she has worked since 1969.

Among previous honors, Dr. Young has received the CHEA Silver Jubilee Scholorship in 1974, was made a Fellow of the Canadian College of Teachers and won the Saskatchewan School Trustees' Scholarship in 1976. In 1977 she was listed in the Worlds's Who's Who of Women.

FOCUS ON Energy

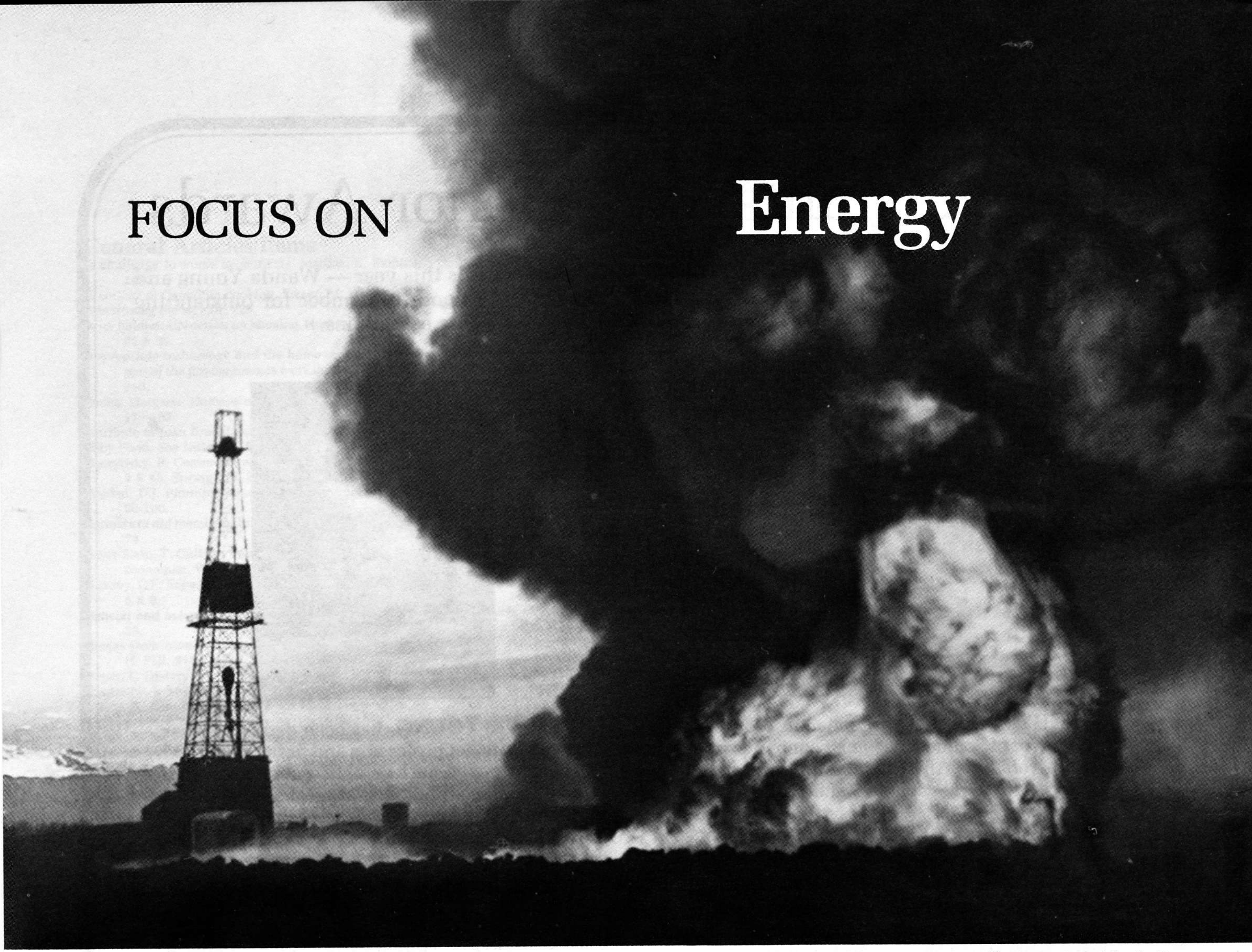
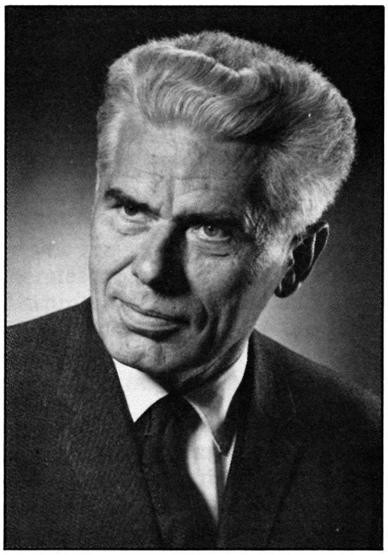


Photo courtesy Alberta Government

Energy is vital to our health and safety, and the end of fossil fuels is in sight. If we are to be fed ***adequately*** *in the future, nuclear energy is the most likely to provide the basis for it. Since fossil fuels are "once only" for mankind, the raid currently being perpetrated on them can only be justified if they are used as a base for the development of a feasible long-term energy source.*

F. Hoyle
Ten Faces of the Universe, 1977

The theme for the 1980 issues of the **CHE Journal** is the "Conserver Society". The Winter, Spring, Summer and Fall issues have focused on food, housing, management and energy respectively.



Energy — The Case of The Seven Myths

W.E. Harris
Guest Editor

From the vantage point of one who has studied and spoken on the topic of energy for the last 30 years, current public understanding of energy matters has both heartening and disappointing aspects. Unfortunately, several myths persist that inhibit effective action.

The first myth relates to the amount of oil available. When Ralph Nader, a lawyer, repeatedly states with obvious sincerity that there is a virtual sea of oil out there and that any shortages are contrived, a substantial fraction of the public believes him. The fact is that, in Canada and in the United States, the rate of discovery of new oil has fallen well behind the current rate of use. The rest of the world is not much more successful in this respect. Even though we can and should be doing much more to conserve supplies, oil and gas will soon be gone, never to reappear.

The second myth is that the energy situation we are now in was unforeseen. Large numbers of people have discovered, to their amazement, that the energy situation is genuinely serious and they feel betrayed because no one informed them. In fact there were many who were trying to get the message across, but few would listen. Decades ago a clear and accurate description of the future was made by Harrison Brown in *The Challenge of Man's Future* (1954). He was far from alone.

A third myth is that solar power is the answer of the future. Even if you lived in Arizona, where there is much more sunshine, you would starve if you depended on solar power. In Canada, to pin our trust for the future on solar power can only be labeled naive. Unfortunately, direct solar energy is of low intensity, diffuse, and intermittent, therefore requiring a large energy subsidy for development. Moreover, it is available in the smallest amounts when and where it is needed most. Critical quantities such as the solar constant, the hours of isolation to be expected, and the limits to conversion efficiency have been well known for a long time. No great breakthroughs can be counted on. Nevertheless, to the extent it can usefully contribute, the sun as a source of energy should be exploited (as should all other minor sources). It would be overly optimistic, however, to expect that it can contribute as much as five percent of the total future energy needed.

The fourth myth is that nuclear power is incredibly hazardous. When Jane Fonda, an actress, asserts with obvious sincerity, that we don't need nuclear power, she is believed by increasing numbers of people. The fact that hundreds of nuclear power stations have operated for years without a fatal nuclear accident is dismissed as insignificant. The Three Mile Island partial meltdown is probably the all-time costly industrial accident on record, and yet no one was hurt in either a physical or chemical sense. Contrary to popular opinion, a power reactor is not an atom bomb and it cannot explode like one. The nuclear industry is, with no exceptions, the *safest of all industries*, energy or otherwise. But being new and strange, it is viewed with fear and suspicion. In this area especially, manipulation of public opinion by psychological terrorists abounds. Perhaps as an object lesson all nuclear power stations should be shut down for a year: the tragedy

(continued on page 218)

Dr. Harris has been with the Department of Chemistry, University of Alberta since 1946 and was its Chairman from 1974 to 1979. He has about 80 scientific publications to his credit. He is the author, with colleagues, of three books and is currently completing a fourth. His work has been recognized by several national and international honors: The Fisher Award in Analytical Chemistry, and the Chemical Education Award by the Chemical Institute of Canada; election to Fellowship in the Royal Society of Canada; the Outstanding Achievement Award of the University of Minnesota; and election to Fellowship in the American Association for the Advancement of Science.

He has been concerned and recognized the seriousness of energy-population-conservation matters long before they became a topic of broad interest.

Developments in Renewable Energy: A Brief Review

D. Gordon Howell

Abstract

Associated with the shortage of energy in the form of fossil fuels, and the disputes arising from the growing use of nuclear power, is the whole socio-economic aspect of energy resource control. In the past, control centered around large businesses and government; in the future renewable energy resources will be independently controlled and will centre around the user, or small groups of users.

The blocks in the way to acheiving this independence are political and to a lesser degree, technical. Some governments in the world are backing renewable energy research and development and it is thriving. For the most part, the technical feasibility of renewable energy utilization is well established. The economic viability, when competing with non-uniformly subsidized fossil and nuclear fuels, is marginal in all but remote areas. This is changing rapidly, however, with the advance of high-cost frontier and Middle Eastern energy supplies. The challenge now is to make renewables economically attractive in the face of these high prices and non-uniform subsidies.

This can be helped through education which provides understanding of the many types of renewable energies, how they work, where they can be applied, and their present state of development.

Résumé

Développements dans le domaine de l'énergie renouvelable

Tout l'aspect socio-économique du contrôle des sources d'énergie est originé par une pénurie d'énergie sous la forme de combustibles fossiles, et par des discussions relatives à l'usage croissant de l'énergie nucléaire. Par le passé, les grandes entreprises et le gouvernement ont eu le monopole de ce contrôle; à l'avenir, les sources d'énergie renouvelable seront contrôlées de façon indépendante et seront le monopole du consommateur ou de petits groupes de consommateurs.

Les obstacles s'opposant à la réalisation de cette indépendance sont d'ordre politique et, à un degré moindre, technique. Quelques gouvernements, dans le monde, encouragent la recherche et le développement de l'énergie renouvelable, laquelle est en pleine expansion. Dans l'ensemble, la practicabilité technique de l'énergie renouvelable est bien établie. La viabilité économique, lorsqu'elle s'affronte à des combustibles fossiles et nucléaires subventionnés de façon inégale, est marginale dans tous les domaines sauf les plus éloignés. Cependant, ce phénomène connaît une évolution rapide, grâce à l'acheminement de réserves d'énergie frontalières coûteuses et d'autres en provenance du Moyen-Orient. A présent, le défi consiste à rendre les sources renouvelables très attrayantes sur le plan économique, de sorte à faire face à ces subventions onéreuses et inégales.

On peut y remédier par le moyen de l'éducation et d'une compréhension des différents types d'énergies renouvelables, de leur fonctionnement, de leur utilisation pratique, et de leur étape actuelle de développement.

The term renewable energy usually refers to the energy sources that have stored solar radiation energy from recent time, and include such diverse forms as wind, direct solar, ocean thermal, tidal, wave and biomass. Geothermal, although not derived from solar radiation, is included as well.

Generally, all forms of energy except for nuclear and geothermal were derived from solar radiation at some time. Fossil fuels represent solar energy stored for many thousands of years, for example, the wind energy represents solar energy that has been stored for a few days.

Prodded by the critical strategic implications of dependency on foreign powers for energy supplies, some farsighted governments are now seeking to explore renewable energy sources and tap their independent yet dependable qualities. Renewable energy technologies, in general, have four unique properties that make them very attractive:

- They are renewable. Planet Earth receives in direct energy from the sun daily, over 2000 times the amount of energy that this civilization will use in the next 20 years.
- Renewable energies can supply energy on a scale that is appropriate to the end use. Since some renewable energies, particularly direct solar, are diffuse forms, they are most appro-

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Gordon Howell graduated with a B. Sc. in Electrical Engineering from the University of Alberta in 1975. He is currently a research engineer with the Solar and Wind Energy Research Program (SWERP) of the Alberta Research Council. The author has taught courses on solar energy for the Faculty of Extension at the University of Alberta. He is interested in both the practical and theoretical aspects of solar utilization placing importance on passive solar housing, and overall energy economics.

priately applied in areas that use diffuse energy — that of space heating. If renewable energies are to be applied in areas which use more concentrated energy, as in industrial process heat or transportation, then the energy must be concentrated too, either through a large collection area or over a period of time.

- Renewable energies can supply energy of a quality (or temperature) that is appropriate to the end use. Thus, in the case of solar home heating, the thermal or nuclear power plants, gas plants and refineries do not have to be heated to high temperatures just to heat a house to 20°C.
- They can be simple, understandable and controllable from the user's point of view. This property is very important to the general public which directly controls about 30% of the stationary energy used.

These properties have both hindered and helped the utilization of renewable energies. On one side, the politicians look at the diffusivity (or low energy density) of renewable resources as compared to the high energy density of fossil fuels and then discount the former's impact completely. On the other side though, the general public has access to all the knowledge and skills required to implement solar energy and wind energy technology. This is in extreme contrast to the public's lack of skills required for the use of fossil fuel technology, and is an important positive factor in the future rate and depth of renewable energy penetration.

Energy use can be divided into many categories, which can include many energy density requirements. Those low energy density categories in which renewable energy, particularly solar, can be economically employed immediately, include space heating and air conditioning and account for about 20% of the total energy used. Other categories such as industrial heating, which require higher energy densities, will be economically viable in the near future and account for another 30%. Transportation is the area requiring the highest energy density and thus the most amount of research to bring it into viability. This will be helped tremendously, though, with the higher prices that must be charged to bring in fossil fuels from the tar sands and through the Arctic pipelines.

SOLAR

Active Solar Systems

Sunlight is characterized by a high level of variability and diffusivity, resulting in the need for storage and concentration and is particularly sensitive to cloud density. Typical values of solar intensity are 1100 W/m^2 on a very bright day, and 100 W/m^2 on a rainy day. The use of direct solar energy can take many forms, including the direct conversion of sunlight to electricity through photovoltaic cells, and the direct conversion of sunlight to heat through solar collectors. The use of the term collector here is very broad because this can be divided again into active and passive solar categories. Active solar energy utilization involves the use of pumps, fans or other mechanical means to move the heat energy from a collection point to the storage or the application areas. The most prominent component of this system, a collector, consists of a black absorber surface surrounded by insulation and glass. The solar radiation passes through the glass, striking the absorber and heating it up. A fluid, usually air or water/glycol mixture, is passed next to this surface to transfer the heat away.

Of importance to the efficiency of this device is the net transmissivity of the glass, absorptivity of the absorber surface and the conductivity of the insulation. Research is presently being conducted in a number of areas: increasing the glass transmissivity through the use of special selective surfaces which would pass shorter wave length solar radiation and yet block heat energy from the absorber surface; using selective surface coatings on the absorber surface to increase the absorptive qualities of the surface yet reduce the amount of heat emitted; and decreasing the conductivity of the insulation so that the heat generated by the collector would escape more slowly to the surroundings. Included in active solar system research, is the development of very high efficiency evacuated tube collectors, concentrating collectors that track the sun across the sky both diurnally and seasonally, special heat transfer liquids and gases, and heat storage containers. Typically, massive substances such as rocks and water are used to store heat and advantages and disadvantages exist with both systems. Other developments in storage systems are in eutectic salts, and zeolite. Saskatchewan Minerals Corporation is producing a eutectic salt tray that stores heat when the salt melts and releases heat when it solidifies. Zeolite stores heat as a chemical reaction releasing heat water, and releases heat when water is added. This has the potential of very long term energy storage without heat loss.

Another very interesting solar research project is the solar power tower experiment in Arizona. There they use computer controlled mirrors to focus the sun's rays onto a central receiver tower painted black. Water is pumped up the tower, converted to steam and then used to drive normal steam turbine generators. This system concentrates the diffuse solar energy.

Rideau Falls Renewable Energy Exhibit, Ottawa. Active solar home and Darrieus windmill.

Passive Solar Systems

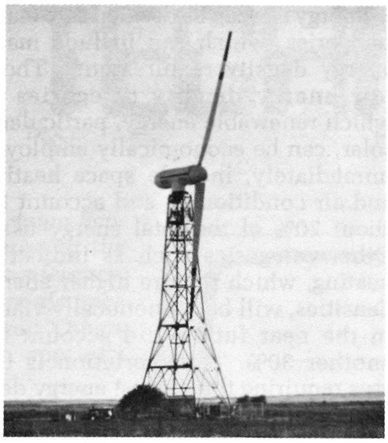
A passive solar system does not rely on pumps or fans to move heat around, but rather operates just because it sits in the sunshine. This technology uses simple techniques, and includes direct gain south-facing windows, mass storage walls, Trombe walls, natural air circulation loops, and passive sun zones, and relates more appropriately to space heating and cooling of homes and buildings. The solar collector in these systems is south-facing windows, and uses the "unconcentrated" solar energy directly. Storage of energy is similar to the active solar systems in that massive materials are used, but these can take the form of mass walls, floors, or storage containers. Research in passive systems is being directed towards relating the dynamic response of a building to the solar gain, mass quantities and placements, and conservation measures. This technology tends to provide more than just energy and money savings, but many aesthetic qualities as well.

Solar Cells

Solar cells or photovoltaics are another major direct solar energy conversion system. The cell is an electronic component similar in style to a transistor and converts sunlight directly to electricity. Unfortunately, typical efficiencies are presently in the order of 10 to 15% with 27% being the maximum theoretically acheivable efficiency. Much of the research in this area is being directed towards improving the production methods of the base material, usually silicon crystals, in order to reduce its cost. Other research includes the use of different base materials and different concentrations and types of impurities in the silicon. Presently, the cost of solar cells is $20 to $40 per peak Watt of capacity in small quantities, and as low as $3 per Watt in large quantities. In comparison, thermal power plants finishing construction now cost 80¢ per Watt, and in design now cost $1.20 per Watt. It is expected that by the middle eighties, solar cells will cost 70¢ per Watt. At that time the application of solar cells could include in situ production of electricity both for homes and industries.

WIND

Wind energy is effectively solar energy that has been stored for a few days or months. It is diffuse, and characterized by gusting; usually requiring some type of storage and concentrating equipment to use it effectively. This equipment takes the form of windmills. Past developments in these have included changes in blade number, shape, material, tower design and type of energy generated, bringing the windmill to its commonly known form in rural areas. Today, there is a major push by some of the bigger governments and companies in the world to increase the state of the art in windmill design. Such projects by Pratt and Whitney, NASA, DOE, and Boeing in the USA and in Tvind, Denmark, typify this. These are large horizontal axis megaWatt capacity electricity generating windmills in the prototype stage featuring various concepts such as flexible connections between major components, downwind or upwind blades, and novel direction orienting mechanisms. At present, there are also many types and brands of smaller horizontal axis wind machines on the market ranging in power capacity from a few hundred Watts to several kiloWatts and prices from $600 to $10,000. Recognizing this, the US government has now set up a windmill testing facility at Rocky Flats in Colorado.



DOE windmill of megaWatt capacity in the U.S.A.

Some wind energy research is also being directed towards vertical axis machines. As the name indicates, the axis about which the blades rotate is vertical, in contrast with the more stereotypical horizontal axis windmill. In the vertical axis class, there is the Darrieus machine, which looks like an eggbeater, the Savonius, and other variations on the Darrieus idea, such as the Pinson Cyclotron. The vertical axis machine's main advantage is the ability to accept shifts in wind direction instantaneously. The main disadvantage in the past, in some designs, has been the severity of vibrations in the rotor, and the need for guy wires to provide stability. The Savonius type of windmill looks like split oil drums stacked to three or four levels but is usually used only in low power applications.

A major problem in wind machines has been in designing a blade that will be efficient in low and high wind speeds, and an electrical generator that will be efficient at very low rpm. These problems occur because the power in the wind depends on the wind speed cubed, therefore giving tremendous power variations with minor speed changes. Typical wind powers of 60W/m^2 at a speed of 20 km/h, 1600 W/m^2 at 60 km/h and 7000 W/m^2 at 100 km/h are commonly realized. In generating electrical power, constancy of electrical voltage and frequency is required as well. Much research is being directed towards this area and includes novel devices such as constant frequency generators and voltage regulators.

Storage of energy has always been a concern for this civilization and this concern is evident in wind power applications too. Wind energy storage has usually taken the form of banks of batteries, but can include compressed air cylinders, water pumped uphill into a dam reservoir, and grid storage. Grid storage is a concept whereby windmills feed power into a common grid, under the assumption that some windmills somewhere are always producing power. This makes many of the wind machine proponents happy, but causes distress for the utility company which must construct standby power capacity yet receive little revenue for it.

BIOMASS

Biomass energy is generally defined as that energy which is recovered from plant, animal or other organic material. The material occurs in the form of animal manure, sewage, landfill and refuse from agricultural harvesting, lumbering, sawmill, and food and animal processing operations. Energy in the material can be recovered and concentrated in a number of ways, depending on the type of material:

- Combustion — simple burning of the material produces recoverable heat.
- Gasification or pyrolysis — heating the material without oxygen to a very

high temperature causes flammable gases and oils to be produced. These can be drawn off and burned.

- Fermentation — introducing yeasts to a material causing chemical reactions and the production of alcohols in a way similar to the production of alcoholic beverages.
- Digestion — introducing bacteria without the presence of oxygen to a material, causing it to be digested and producing methane gas which can be burned.

The use of methane and alcohol as a transportable fuel is very promising and is causing a lot of interest. In Brazil today, a significant portion of their automobile fuels is provided by alcohol derived from sugar cane refuse, although, in general, the latter three processes have not yet reached widespread commercial scale. Burning the refuse is an idea which has been suggested for many years but it is only now that some cities are using this in their electricity generating stations.

GEOTHERMAL AND OCEAN THERMAL

It is known that a difference in temperature between two points can result in useful energy production. This is the concept behind geothermal and ocean thermal energy sources. Geothermal uses the earth's higher deep crust temperatures to heat water and make steam to drive standard electric generating turbines, or to heat buildings. Presently, much of Iceland and parts of New Zealand obtain their energy from this form. The University of Regina is directing some research into this area as well. Their project involves the drilling of two wells 2230 metres into the earth. Down one well will be pumped cold water, up the other will be drawn hot water for heating buildings.

Ocean thermal power uses the temperature difference between the warm surface of the ocean and the cold depths to provide energy. This is not a new idea, but was demonstrated as early as 1929 in Cuba, with a 20 kW plant. The temperature difference in the waters produce energy by driving a heat engine, similar to a refrigerator in reverse. Some research in this area is presently being conducted in Florida.

WAVE AND TIDAL

The movement of water as waves and tides has long been known as a source of energy. The attempts to exploit this power have not been extensive. Many concepts of wave power have been described, and included in some prototypes, but no major development program has been carried out.

Wave energy takes different forms. There is the kinetic energy in the forward motion of the wave — highly noticeable as it strikes ships and cliffs, and the potential energy of the raised water at the wave crest. In comparison to some of the other energy sources previously discussed, wave energy intensity can reach thousands of Watts per square metre. This energy is derived from the wind affecting the ocean currents and has been naturally concentrated over time and space.

Many mechanisms have been proposed for utilizing wave energy. For example, waves can be made to compress air in the top of a floating tank, using one-way air valves. The compressed air is then bled out through a turbine to generate electricity. In a different device, a float surrounding a cylinder rises and falls with the waves and can be made to push and pull on pump plungers attached to the cylinder.

The "nodding duck" concept employs large cam-shaped "ducks" mounted on a long floating frame. The ducks oscillate relative to the frame, driving hydraulic pumps. This scheme is presently in the model testing stage and it is difficult to predict when commercial feasibility will be obtained.

Tidal energy use has received much more development than wave energy. The St. Malo tidal power project on the Rance River in France was completed in 1967 and has an installed capacity of 240 MW. Several studies have been undertaken on the Passamaquoddy project in the Bay of Fundy in the last 60 years but have usually been abandoned.

The potential energy in tides exists in the large rise in the water level twice per day. This can then be channelled to electric generating turbines in a number of ways. The Bay of Fundy is particularly a good site for tidal energy generation because the bay acts as a resonating device and causes the highest tides in the world, some 10.7 metres high in places. At St. Malo, the tides are 8.4 metres high. The River Severn in England, with a tide of 9.8 metres, has been studied also.

SUMMARY

This article has been a brief review of the developments in renewable energy research. There are technical problems associated with the use of such energy resources, primarily caused by variability and low energy density which results in unknown supply and demand mismatching and the need for concentration devices. The problems encountered in renewable energy utilization are certainly no more insurmountable than those of the tar sands, the offshore or the Arctic oil. But before any consideration is given to the use of any energy resource, conservation measures must be taken, to make the energy user more efficient.

The qualities of strategic independence, renewability, unsophistication and environmental harmony make renewable energies very attractive as future energy sources. ●

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Editor's Note: See page 253 for additonal resource materials on energy and energy conservation.

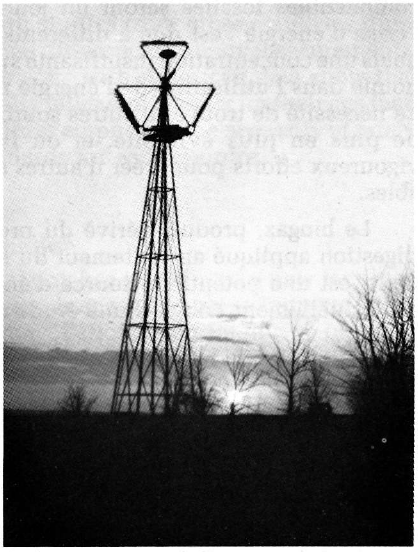


Photo courtesy A. Cadieux

Biogas From Biomass

A Potential Energy Source

Herbert M. Lapp

Abstract

Canadians are the second highest per capita energy users in the world. Approximately two-thirds of this energy is provided by liquid petroleum fuels and natural gas. These conventional fuels are non-renewable, unequally distributed, and are becoming very expensive. Moreover, recent world events have shown that escalating costs and diminishing supplies are determined less by market forces than by the decisions of the producing nations.

Although it has long been known that our fossil fuel reserves will eventually be exhausted, the current "energy crisis" has several contributing factors, not the least of which has been minor focus on efficiency and economy of energy use. The need for alternative energy supplies is increasingly apparent, and vigorous efforts are now being made to establish viable alternate energy sources.

Biogas, a by-product from the anaerobic digestion process applied to treating animal manure, is one potential alternate energy source which is currently being seriously examined.

Résumé

Biogaz dérivé d'une biomasse —
une source d'énergie alternative.

Les Canadiens sont les seconds au monde pour la consommation d'énergie par tête d'habitant. Les ⅔ environ de cette énergie sont produits par les combustibles liquides du pétrole et par le gaz naturel. Ces combustibles courants sont non-renouvelables, de distribution inégale et sont en passe de devenir très chers. En outre, les récents événements mondiaux ont montré que l'escalade des coûts et le déclin des réserves d'énergie sont déterminés moins par les forces du marché que par les décisions des nations productrices.

Bien qu'on sache depuis longtemps que nos réserves de combustibles fossiles seront un jour épuisées, l'actuelle "crise d'énergie" est due à differents facteurs, parmi lesquels une concentration insuffisante sur l'efficacité et l'économie dans l'utilisation de l'énergie n'est pas le moindre. La nécessité de trouver d'autres sources d'énergie devient de plus en plus évidente, et on fait actuellement de vigoureux efforts pour créer d'autres sources d'énergie viables.

Le biogaz, produit dérivé du processus anaérobe de digestion appliqué an traitement du fumier d'origine animale, est une potentielle source d'énergie alternative qui fait actuellement l'objet d'une étude sérieuse.

Canadians are the second highest per capita energy users in the world, and this demand is related to a number of factors. Firstly, cold winters cause a need for space heating in buildings of all types. Secondly, our vast land area with a widely distributed population places a heavy demand on energy fuel for transportation. Furthermore, Canada's high standard of living, which ranks among the top 20 of the world's developed countries, has encouraged a proliferation in the acquisition of energy consuming machines and household appliances. Many of these can be classified as luxuries rather than necessities. Certainly the historical low price for an abundant supply of conventional liquid petroleum energy fuel has resulted in only minor focus on efficiency and conservation in energy consumption.

Oil and natural gas are major sources for the energy currently used in Canada. Lesser quantities are provided by electricity, coal, wood, and in recent years, nuclear energy. However, approximately two-thirds of Canada's total energy consumption is provided by liquid petroleum fuels and natural gas. Major disruptions would occur in individual lifestyle as well as in industry, if the supply of liquid petroleum fuels were to be withdrawn or even substantially reduced without the acquisition of an acceptable alternative.

It has become clear that current rates of increase, or even present levels of consumption cannot be maintained from the current sources without major political, social and economic modifications in society. The availability of low cost imported oil to which society became accustomed to in the past is not likely to reoccur in the future. The oil producing nations (OPEC[1]) have demonstrated by the application of the 1973 oil embargo that international supplies and pricing can be effectively controlled.

Herbert M. Lapp, B.E., M.Sc., P.Eng., P.Ag. is a professor with the Department of Agricultural Engineering, University of Manitoba. He has worked as an agricultural engineering consultant for the World Bank, FAO, and CIDA in several countries including Pakistan, Peru, Nigeria, the Phillipines and the Republic of Honduras. As a Columbo Plan advisor, he helped establish the first Agricultural Engineering Department in Thailand at Khon Kaen University. Mr. Lapp is an active member of several professional societies including the Canadian Society of Agricultural Engineers and the Biomass Energy Institute Incorporated, Winnipeg.

[1] OPEC — Organization of Petroleum Exporting Countries

Thus, "post OPEC" years in Canada have been characterized by energy related programs to effect energy conservation in all areas of utilization and to actively search for viable alternate energy sources. Vigorous efforts are now being made to establish sources which can make contributions as replacement energy fuels or as a means to conserve existing petroleum supplies. Treatment of animal manure with the anaerobic digestion process, having the objective to produce biogas, is currently being seriously examined as one potential alternate source of energy fuel.

Biogas As A Potential Alternative

Biogas technology has been recognized as a significant producer of energy. It is now part of the "United Nations World Plan of Action for the Application of Science and Technology to Development". The use of microbial processes to treat urban and rural wastes has been a common practice for many years, however the objective in using the process has been for sanitation and health promotion rather than for the recovery of the biogas by-product.

Attention was given to the process by European farmers during and immediately following World War II with the objective to produce energy. A deficiency of petroleum fuels in Germany resulted in the construction of some 200 on-farm digesters between 1950 and 1960. Biogas from some of these units was used as an energy fuel for farm tractors. Soon, however, the availability of low cost petroleum fuels in the latter 1950's led to the abandonment of practically all these early farm installations in Europe. In the recent post OPEC years, a renewed interest has developed in the potential of applying the anaerobic digestion process to farm wastes to produce biogas.

Anaerobic Digestion

Animal wastes contain large quantities of organic matter which if processed by anaerobic digestion in a controlled environment, will produce significant quantities of methane gas. The term "anaerobic digestion" means the controlled breakdown of organic matter in the absence of oxygen. It is a two-stage biological process and each stage is performed by a distinct group of bacteria.

The first stage involves the conversion of fats, carbohydrates, and proteins in the manure to simple organic acids such as acetic and propionic acid. A mixed culture of acid forming bacteria perform this phase of the process. The second stage involves the transformation of the acids to methane and carbon dioxide. This transformation is completed by the environmentally sensitive group of bacteria recognized as methane formers.

The quantity of biogas possible per unit liveweight varies for the types of livestock (i.e. swine, dairy or beef cows and poultry) according to the organic matter content present in the waste as well as for the method of storage prior to the anaerobic digestion process treatment.

Properties of Biogas

Biogas has been found to contain from 60-70% methane, from 30-40% carbon dioxide, small amounts of hydrogen sulfide, and additional gases including hydrogen, ammonia, and oxides of nitrogen. Scrubbed biogas (pure methane) is colorless, odorless, lighter than air, combustible, and explosive when mixed with air in proportions ranging from 5-15%. Methane is also known as a "permanent gas" because it cannot be liquified by pressure at ordinary temperatures. This property presents a unique problem to storage and portability.

Safety

The explosive characteristics of biogas demand that extreme safety precautions be taken to prevent ignition in all areas of production, handling, storage, and utilization. Thus, safety is a prime consideration and advice from persons experienced in handling natural gas should be sought when biogas systems are being planned or built.

Feasibility

In Canada, large numbers of livestock and poultry are managed in feedlots and confinement housing systems which result in the rapid accumulation of large quantities of manure in concentrated areas. This factor is favorable to the technical and economic feasibility of operating anaerobic digesters to produce biogas for use as an energy fuel. H.M. Lapp and colleagues at the University of Manitoba studied the fundamental considerations relating to methane production and utilization, both in the laboratory and by operating pilot scale digesters using swine manure between 1971 and 1979. Their work has advanced the knowledge required for the application of biogas technology in Canada where cold winter temperatures are experienced (Figure 1).

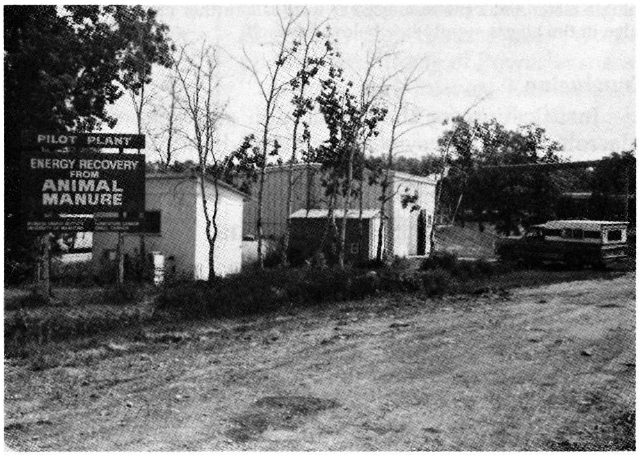


Figure 1. Pilot plant used to study anaerobic digestion for the production and utilization of biogas at the University of Manitoba between 1973 and 1979.

Utilization

Biogas can be used directly for cooking, lighting, heating, and to power internal combustion engines (Figure 2).

Options for the use of biogas can be listed in priority order:

1. For direct burning for space heating, cooking, lighting, grain drying or for gas-fired refrigeration and air conditioning.
2. To fuel a stationary internal combustion engine driving a generator to produce electricity, or pumping water in irrigation.
3. To fuel mobile power units such as cars, trucks, and tractors.

Options 1 and 2 are the most practical use patterns to be selected. Option 3 has popular appeal but the least economic practicability, and would require high pressure storage of the energy fuel.

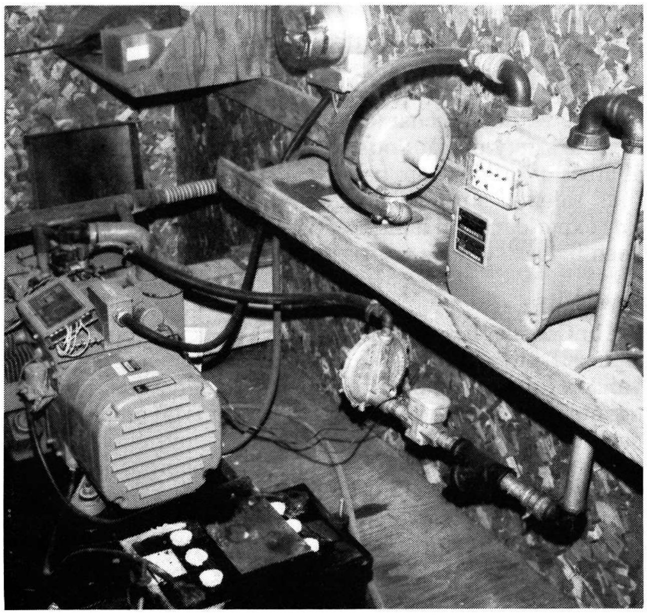


Figure 2. A 7.6 kW internal combustion engine using biogas (3.5 m^3 per hour) to operate a generator delivering 3.3 kW of electrical power. Note from left to right above the shelf a watt-hour meter, pressure reduction valve, gas volume meter and a pressure gage as well as a further pressure reduction valve in the biogas supply line below the shelf.

Conclusion

Justification for the installation and operation of an anaerobic digestion system for a Canadian livestock enterprise should be based on the advantages to be gained from the digester, an understanding of the process, as well as the costs and problems specific to each individual enterprise.

Even in our cold climate regions, the technical and economic feasibility of operating anaerobic digestion treatment systems is near at hand. The adoption of these systems will be accelerated by the continuing escalation of conventional energy fuel prices and by growing rural-urban environmental concerns such as odor levels and pollution of water supplies. Credits supporting the application of anaerobic digestion technology on Canadian farms including biogas production for energy use are:

- A reduction in manual labor is possible because of the use of mechanically operated systems for handling wastes.
- Fertilizer nutrient value of the waste is maintained since the anaerobic digestion system does not remove nitrogen.
- An environmental improvement is affected through a reduction in odor levels.
- Polluting potential is reduced since the process destroys large quantities of organic matter in the waste.
- Significant quantities of biogas providing a useful energy source is produced.

The operation of an anaerobic digestion system using animal manure to produce biogas under the management of a livestock enterprise operator is technically feasible in Canada. Adoption of the technology will be related to the relative credit values assigned to the various benefits attributable to the process as they may be applied to individual enterprises. ●

The Case of the Seven Myths

(continued from page 211)

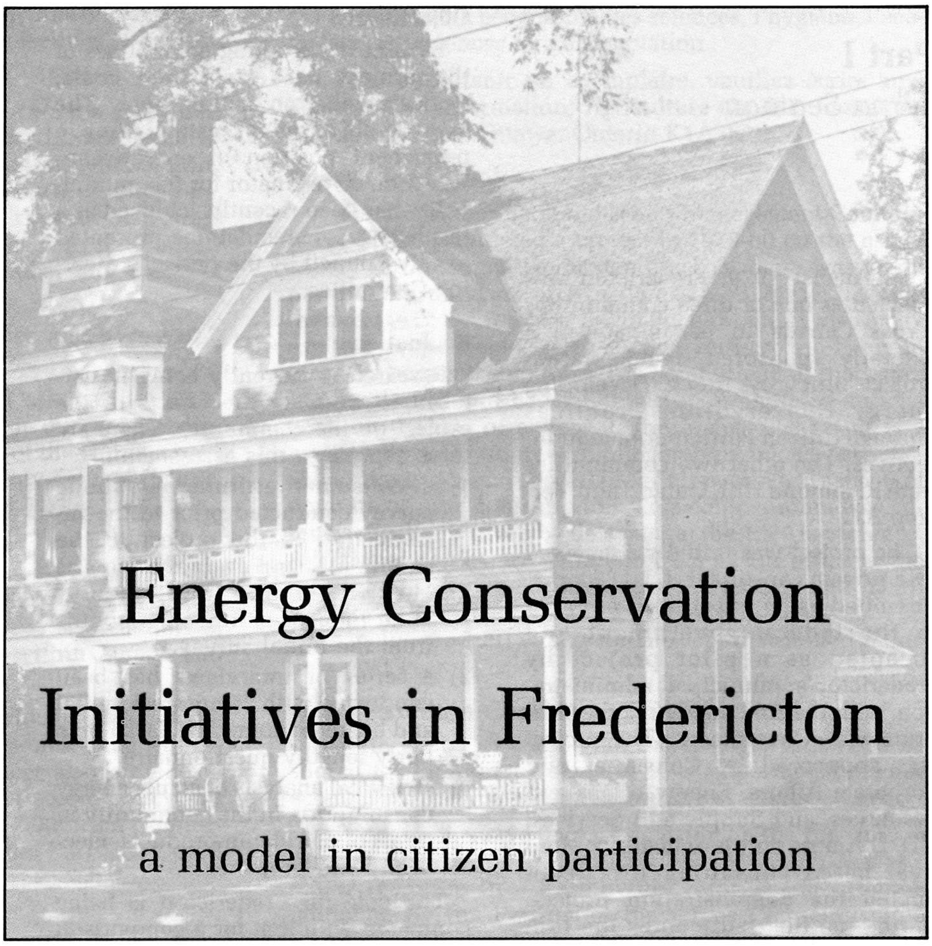
would be that the manipulators would not suffer as much as the already unfortunate who would bear the brunt of the resulting disruption.

The fifth myth is that we have plenty of time to explore a myriad of energy options for the future. But history shows that a few decades are needed to bring about a conversion from one major energy base to another. Although all promising avenues should be explored and responsibly used to the extent possible, squandering our time chasing energy phantoms is a devastating mistake.

The sixth myth, and uniquely Canadian, relates to the amount of available oil in the Athabasca and other oil sands of Alberta. There is indeed a large amount of oil in place. But oil in place is not necessarily available oil. When we need to use the energy equivalent to a barrel of oil to extract a new barrel of oil from a resource, that resource cannot be considered a source of net energy. Since the energy subsidy that must be spent to obtain oil from the sands constitutes a large fraction of the total produced, these sands cannot be looked on as Canada's energy-ace-in-the-hole although they can contribute to make a useful contribution.

The seventh, and the most distressing, myth (seldom expressed), is that those of us currently alive have the right to find and use all the remaining oil and gas; while ignoring the plight of our descendants. Surely it is the height of immorality to pillage this once-only resource, with only minimal development of a feasible, long-term energy base for the future.

Each of the seven myths unfortunately reinforces an all-too-human desire to believe that there is little urgency. To avoid ending on a pessimistic note, let me state what I believe to be our single feasible energy option. The option is to temporarily expand the use of coal to help gain some precious time and to convert to a nuclear power base with all deliberate haste. The use of coal is suggested in spite of its many undesirable qualities (dangerous to mine, carcinogenic, heavy metals, dirty) because its use can be expanded relatively quickly. Fortunately, the nuclear avenue is one that is cheap, clean, and feasible as well as safe in comparison with any other foreseeable energy future. The health hazards of failing to get on with the development of nuclear energy are so large that further delay is nothing less than irresponsible. ●



Energy Conservation Initiatives in Fredericton

a model in citizen participation

Photo Courtesy of R.P. Mullen

Abstract

In August 1979, Fredericton was selected as one of three municipalities in Canada to participate in a federally sponsored demonstration project entitled: *Developing Energy Conservation Practices Through Citizen Participation and Initiatives.* The purpose of this project was to provide an opportunity through public participation for citizens themselves to determine target areas for energy conservation, define goals and objectives, and develop strategies and an action plan for community-based energy conservation.

Two home economists coordinated the project in Fredericton, New Brunswick — the only city which has assumed total responsibility for the continuation of the programs begun in the demonstration phase.

Citizen groups have formed to deal with practical solutions to rising energy costs in the home, the work place, and in the recycling of second hand goods. Professionals are involved also, reporting the community's conservation efforts, and in preparing energy conservation curriculum for elementary and high schools.

Lorna Seaman and Louise Landry

Résumé

Au mois d'août 1979, Fredericton a été choisie comme l'une de trois municipalités du Canada afin de participer à un projet pilote subventionné par le gouvernement fédéral intitulé: Le développement d'habitudes d'économie de l'énergie au moyen de la participation et des initiatives des citoyens. Le but de ce projet était de fournir une occasion par la participation publique aux citoyens eux-mêmes de déterminer des domaines-cibles pour l'économie d'énergie, de définir des buts et des objectifs et d'élaborer des stratégies et un plan d'action pour l'économie d'énergie au niveau communautaire.

Deux économistes ménagères ont coordonné le projet de Fredericton, Nouveau-Brunswick — la seule ville qui a assumé la responsabilité totale de continuer les programmes commencés pendant la période de démonstration.

Des groupes civiques se sont formés afin de trouver des solutions pratiques aux coûts énergétiques croissants à la maison, au travail et dans le recyclage de produits usagés. Des spécialistes y participent aussi, rapportant les efforts publics pour économiser l'énergie et préparant un programme d'études pour les écoles primaires et secondaires.

Lorna Seaman is a home economics graduate from Mount Allison University with a Diploma in Nutrition from the University of Toronto. She has worked as a nutritionist in Nova Scotia and Ontario and has built a passive solar house in which she and her mother and daughter are actively practicing a conserver lifestyle. She is presently a freelance consultant in energy conservation and is Newsletter Editor for the Canadian Association for Future Studies.

Louise Landry is a graduate of St. Francis Xavier University and the Univ. of Manitoba in Clothing and Textiles. She has lectured in the C & T field prior to becoming a housing rehabilitation officer. Her recent appointment as Community Energy Conservation Co-ordinator, City of Fredericton, follows successful participation in a federal demonstration project, and is one of the first such positions in Canada.

Part I

Lorna Seaman

In August 1979, Fredericton was selected as one of three communities across Canada to participate in a federally sponsored demonstration project officially titled: *Developing Energy Conservation Practices Through Citizen Participation and Initiatives.* The other two communities were Richmond Hill, Ontario and Vernon, B.C.

The project was initially conceived by a private consultant, L.J. D'Amore, submitted as an unsolicited proposal to the federal government and accepted as a pilot project by Fredericton's municipal administration, with the concurrence of the New Brunswick Government. The project was sponsored by Consumer and Corporate Affairs, Energy Mines and Resources, and Supply and Services. L.D. D'Amore and Associates, a Montreal based consulting firm, conducted the demonstration project. During the first ten months the firm provided a full-time consultant to the city, who lived in the community and acted as a community animator/co-ordinator.

Selection Process

The final selection of Fredericton, Richmond Hill and Vernon was based on responses received through two days of interviews with community leaders in each of 12 communities. Factors under consideration included: (1) the degree of interest of community leaders; (2) the extent of commitment assured from various community sectors; (3) the perceived opportunities for conservation; and (4) the potential for participation by the public.

Purpose of the Project

The purpose was to provide an opportunity through public participation for citizens themselves to establish:

- target areas for energy conservation
- goals and objectives
- strategies
- an action plan for community based energy conservation programs

Objectives

Each of the working committees of the project has established goals, strategies and an action plan. The overall objective of establishing a permanent position of energy conservation co-ordinator for the municipality has been recently achieved as a result of recommendations presented to City Council by the project's Steering Committee.

Evaluation

Research is currently being undertaken to evaluate the effects of the project on the community. There are three aspects to this assessment:

1) a consumer attitude telephone survey conducted prior to the introduction of the project to the community and again ten months later; with a third wave to follow at an interval of 18 or 24 months from the initial survey.
2) a series of interviews has been conducted with 25 non-residential and business concerns, based on a fairly lengthy questionnaire.
3) statistical analysis of actual energy consumption in the community in terms of petroleum products, electricity and propane.

The data for Fredericton is being compared with that for a *comparison community* chosen for its similarities to Fredericton.

The results of this evaluative research, under the direction of Professor Stanley Shapiro of the McGill University Department of Business Administration, have not as yet been released.

Process

In the conceptual model for the process, five stages were outlined: 1) animation 2) awareness 3) collaboration 4) integration and 5) concensus.

During the *animation* stage, interviews and meetings were held with key community organizations to discuss ways in which they might wish to participate in the project. Out of this was established a Steering Committee to the project.

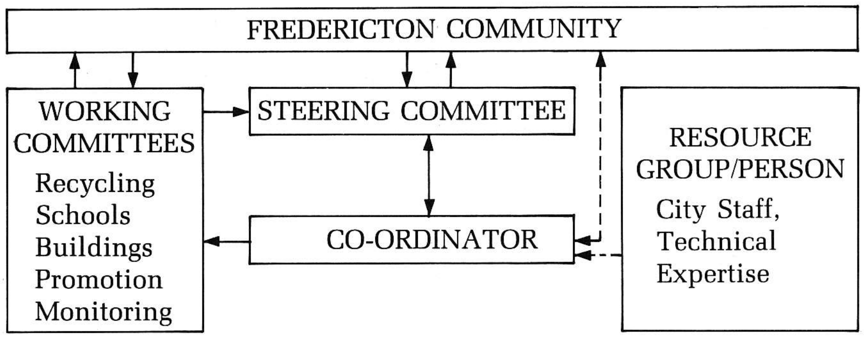
In the *awareness* stage, the intent was to publicize the fact that Fredericton had been selected for a national demonstration project and that citizen participation was being sought. This was done mainly through extensive use of the media.

In the *collaboration* stage, several working committees evolved. A network of interested individuals had been developed in the first two stages, with a few persons already concerned and highly motivated, standing out in particular as potential leaders for projects in key areas of interest. It also seemed likely that the Steering Committee would act principally as an advisory body, and that the real *action* might come from the development of working committees led by these individuals. By the fourth month, five such committees had formed.

During the *integration* phase, citizen workshops were held to examine areas of concern, including passive solar housing design as well as public transportation, recycling, energy conservation in the home, etc.

In the final *concensus* stage, public support of the project was sought. The Steering Committee presented to City Council a comprehensive formal report on the initiatives and accomplishments of the project and recommended that a permanent position for

Organization Diagram for Energy Conservation Project of Fredericton



community energy conservation coordinator be established on City Staff, that an advisory committee be established to direct the work of the coordinator, and finally that a budget be approved for continuation of the type of community outreach that had been initiated during the first ten months of action. Thanks to the steady support of the Mayor and several of the city councillors, to the City Administrator and Director of Administrative Services; and to the skill and commitment of Louise Landry who had been seconded to the project and was an invaluable liaison between the consultant and the community; the recommendations have been adopted by council.

Structure

The development of a solid and workable structure for the project as shown in the diagram provided a smoothly functioning organization which allowed freedom of movement and communication between its various components and provided a clear frame of reference for those involved.

Conclusion

In this section of the article, I have tried to provide the reader with a description of the theoretical framework for the development of the model. In Part II, Miss Landry will describe the realization of that model, and provide insight as to why the model worked so well in the Fredericton situation.

For both of us, our background and training in home economics which included experience in home management, teaching and community outreach and our professional commitment to improve the *quality of life* for all Canadians proved most appropriate to our role as community animators.

ENERGY CONSERVATION PROJECT
PROJET D'ECONOMIES D'ENERGIE
entre nos mains
in the hand of man
FREDERICTON, N.B.

Part II

Louise Landry

The fear with some government projects is that they come and go "like ships in the night." Energy costs for Atlantic Canada are far too serious a problem for ANY conservation project to be taken lightly.

Unlike other New Brunswick municipalities, Fredericton is a "civil service town." Both the seat of the provincial government and headquarters in the province for several federal departments, the average income and general level of employment have allowed this community to be "rather comfortable," despite province-wide disparities.

In recent years, rising costs of fuel both for transportation and home heating have caused hardship for those on fixed incomes, and slimmed down fatter pocketbooks. An *awareness* already existed in Fredericton concerning energy costs, when the city was selected for participation in the federally sponsored energy conservation project. However, there is a vast difference between realizing that energy costs hurt, and knowing what to do about it.

Conservation has long been a way of life to Maritimers. The tremendous success of the 10-month Energy Conservation Project of Fredericton probably had as much to do with our relatively conservative lifestyles, as with the enthusiastic and dedicated animation of the Co-ordinator, Lorna Seaman, herself a Maritimer by birth. Community animation requires a unique balance of skills, talents, and training. Ms. Seaman demonstrated a peculiar talent for activating people.

As a former housing rehabilitation officer assisting residents on low fixed incomes, the value of energy for home heating, its ensuing burden to these people, and problems with insulation contractors and materials emerged as a significant priority for me before the Energy Conservation Project arrived in Fredericton. Asked if I would be interested in working as a resource person to Ms. Seaman, I saw this project as providing a means to the "light at the end of the tunnel" for the steadily depleting budgets of our low income residents. My role as resource person was to familiarize the Co-ordinator with the Federicton community, assist in the co-ordination of the Project's activities throughout the ten months, and carry on once the animation phase was completed.

The notion of energy conservation has not been ignored in Fredericton. Efforts towards conservation had begun years before the Project arrived — somewhat quietly and in various sectors, including the local school board, university, hospital, and municipal government. Their administrations had been working exclusively of one another to control their rising energy costs, but with fairly significant results. However, there had been little dialogue or sharing of experiences for one institution to learn from another. This was in part due to the fact that responsibility for monitoring and controlling energy systems in any one physical plant, be it university or hospital, was a function added to existing maintenance responsibilities. This being the case, there was no one coordinating body, or individual, with the mandate or the time to bring various groups together in the exchange of practical, hands-on information.

I believe one of the truly important accomplishments of the Energy Conservation Project, was that it provided the co-ordinating function which brought key sectors of the community together, working on a mutually pressing concern. A dedicated group has been formed, consisting of representatives from eight major energy users in the city: the university, hospital, local school board, municipal and provincial governments, district labour council, electric power commission, and the ministerial association (on behalf of the churches). Conspicuous by their absence are the industrial and retailing sectors, which have been identified by this committee as target areas for development of conservation programs in the coming year. This Energy Efficient Buildings Committee has outlined an extremely important action plan for the months ahead because they realize that information exchange is merely scratching the surface.

Volunteers from homemakers, to members of non-profit organizations, as well as professional working women contributed time and effort toward the research and preparation of a recycling handbook. Interestingly enough, numerous commercial and non-profit enterprises are engaged in some aspect of recycling in Fredericton, but again, little attempt had been made to co-ordinate these activities for the benefit of the general public. Scheduled for distribution this fall, the handbook has text explaining the whys and hows of recycling, and a directory of business and charitable organizations which accept recycled goods.

As former home economics lecturers, Seaman and I are convinced that the most effective means of developing positive attitudes toward a *conserver ethic* is through early education. Teachers and education co-ordinators from our local school district formed a committee to study the information available, and develop energy conservation curriculum for all levels of education. This is a tall order, and an on-going project for the Schools Energy Committee for the months ahead.

The logo depicting the theme Energy Conservation — In The Hand of Man, was obtained through a contest in the early weeks of the Project. Used for all forms of promotion, the logo has received city-wide recognition having appeared on the local community television channel, in newspaper features, on city transit buses, and postage meter stamps. Use of the logo has provided members of the community with a symbol, whereby energy conservation and/or Project related information can be readily identified.

A project of this nature requires by its magnitude, some measurement of effect on the community. The role of the Monitoring Committee has been to monitor and report on the energy (electricity and refined petroleum products) consumed in the city throughout the duration of the Project. In May 1980 a goal of zero percent energy growth was established for Fredericton, and data analyzed indicate this goal was very nearly achieved for the period January-May 1980, compared with January-May 1979. There has been a reduction in total energy consumption for seven of the first nine months of the Project. The conserver ethic has gained new strength in Fredericton.

This community outreach program, with a well-defined, economically palatable goal, has made a truly effective impression on the community. The federally sponsored phase was completed in June 1980. The City of Fredericton, distinctive not only in successfully embracing the Project, has since appointed a full-time energy conservation co-ordinator to continue and to expand on the programs begun through the assistance of a community participation demonstration project.

Communication concernant les travaux de recherche

Association canadienne d'Economie familiale
Conférence nationale
du 6 au 9 juillet 1981
Toronto, Ontario

Prévoyez dès maintenant de présenter votre travail de recherche à l'une des sessions de la Conférence 81 consacrée à la présentation de travaux de recherche. Veuillez vous inscrire le plus tôt possible si vous avez l'intention de présenter un travail, et veuillez soumettre un résumé de 300 à 400 mots avant le 1 mars 1981 au plus tard. Le résumé doit inclure les noms et l'affiliation institutionnelle des auteurs, le titre du travail présenté, les détails importants de méthodologie, les caractéristiques principales des données recueillies, et une claire indication des antécédents théoriques de l'étude et des exigences audiovisuelles. Le temps accordé pour chaque présentation sera de 15 minutes, plus 5 minutes pour s'installer, répondre aux questions et changer d'interlocuteur. Pour de plus amples renseignements, veuillez contacter: *Anne Kernaleguen, Ph.D., Faculté d'Economie familiale, Université d'Alberta, Edmonton, Alberta T6G 2M8.*

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Plan now to report your research at one of the concurrent research reporting sessions at Conference '81. Please register your intent to report as soon as possible, and submit a 300-400 word abstract by March 1, 1981 at the latest. The abstract should include the names and institutional affiliation of the authors, title of presentation, important details of methodology, the main features of the data collected, a clear indication of the theoretical implications of the study and audio visual requirements. The time allotted per report will be 15 minutes with 5 minutes to set up, answer questions, and change speakers. For further information, please contact: *Anne Kernaleguen, Ph.D., Faculty of Home Economics, University of Alberta, Edmonton, Alberta T6G 2M8.*

RICH
or The Reform of Inefficient Consumption Habits

Iris Fitzpatrick-Martin

RICH, the Reform of Inefficient Consumption Habits, is one of six main approaches to achieving Conserver Society One, or CS$_1$, which is itself one of the three conservationist options proposed by the GAMMA group and described in the book *The Conserver Society* (1979)[1]. The other five main strategies for achieving CS$_1$ are: Sharing by Renting, Management of Time, Conserver Technology, Full Cost Pricing and the Optimum-Mix Economy.

Just as CS$_1$ is the *"easiest"* or most accessible of the proposed Conserver Society options, RICH is the simplest and most direct way of bringing such a society into being. RICH is simply a collection of relatively effortless measures which ordinary people can take in the course of their everyday lives to conserve energy, reduce waste and pollution and save themselves time, money, and aggravation, in the long run. Only a slight shift in perceptions and a resulting change in attitudes and habits, and not a fundamental alteration in values is needed. In fact, the ideas behind RICH are for the most part quite old-fashioned and will probably find an echo in the cultural backgrounds of most readers.

La Réforme Des Habitudes De Consommation Inefficientes

Résumé

L'idée essentielle de RICH (Reform of Inefficient Consumption Habits) est que des réformes minimales, mais cumulatives, dans les attitudes individuelles peuvent conduire a un degré substantiel de conservation. Il ne s'agit pas d'un changement radical des attitudes et valeurs, qui transformerait considérablement le niveau ou le mode de vie. Tout au contraire, il s'agit d'éliminer les mauvaise habitudes aquises durant l'époque ou l'energie et les matières premières étaient disponible a des prix tres peu élevés (pratiques extravagantes qui ne conduisent pas a notre bien-être.)

This article describes some of those aspects of RICH which are of particular interest to home economists.

It is not, of course, an accident that "Reform of Inefficient Consumption Habits" yields the acronym RICH. It suggests that significant material benefit can come, both directly and indirectly, from reduction of waste. Such a change would not involve altering lifestyles or even reducing anybody's current standard of living. We would simply weed out those inefficient, unproductive, and unnecessary consumption habits which have been adopted during a time when energy was relatively cheap and raw materials apparently limitless. RICH is a strategy for conservation directed against the sort of profligacy which eats away at our resources without furthering our happiness.

No one would suggest, for example, that the bright lighting of empty rooms caters to real human needs. Few, however, seem to grasp that it is much less wasteful for individuals to decide by themselves to turn off the lights than to set in motion the complex and sluggish political machinery which will persuade them to do so; which will elect a political party on a platform of energy conservation; which will then employ civil servants to devise economic incentives designed to encourage individuals to turn off lights in empty rooms.

That part of material *throughput* which is wasteful is kept going in tandem with the portion which actually provides consumers with satisfaction. Waste is empowered to move around the throughput cycle not only by those who profit from it but also by the consumers who are careless enough to allow that to happen. Unnecessary products are manufactured along with the necessary ones. The two are often purchased together. The difference becomes obvious only in the course of use and disposal. Products which are virtually useless are, logically enough, little used. Their main purpose is in being discarded; their only value, nuisance. The latter is not entirely true, as can be seen by considering the most glaring example of waste in our society — overpackaging. In order to buy some food products we are also obliged to purchase elaborate, brightly colored, expensive, and often unnecessary paper, plastic, and metal containers. Their value lies primarily in persuading us to buy the product. It is debatable whether this "value" does more for the producer or for the consumer who actually pays for it. As soon as money or credit card changes hands, the fancy package has completed its usefulness. If it seems to be an asset at the check-out counter, it soon becomes a liability to its purchaser and to society.

This is especially true if the package contains food or other items which are

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[1] See also Valaskakis, K. The conserver society: a blueprint for optimum resource management? *Canadian Home Economics Journal*, 1980, 50-52.

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used immediately after purchase. The package quickly becomes dead weight, which, at its most innocuous, takes up space. At worst, the chemical dyes which endow its colorful appeal will pollute the soil on which it is dumped; the complex structure of the plastics or metal alloys which give it *rigidity* will be a virtually indestructible eyesore. It is removed from the consumer's immediate vicinity (and awareness) only by virtue of high taxes paid for garbage disposal. Why, it might be asked, do consumers prefer, or seem to prefer, this kind of packaging?

RICH is a strategy for conservation directed against the sort of profligacy which eats away at our resources without furthering our happiness.

As usual, the answer can be given only by a chicken-and-egg explanation. First, the package is attractive — it appeals to humanity's very primitive desire, not so different from the magpie's, for bright prettiness. If you imagine yourself confronted at the supermarket shelf with two cans of ravioli, of which one is red, yellow, green, blue, and orange with homey scenes depicting the exquisite pleasures of Italian haute cuisine, and another which has minimum labeling giving only hard facts about ravioli in black and white, you can appreciate the relative appeal of the first. To oversimplify, part of the purchase price allows the seller to employ yet more advertising in the mass media, to induce in the consumer and others a fervid love of the brand name, so that he or she will continue to buy the ravioli — provided it tastes good enough when actually eaten. Ironically enough, a successful promotional effort can create a sufficient demand and therefore overall profit so that the fancy-can ravioli can be sold at the same or even less cost to the consumer than the plain-can ravioli, whose manufacturer probably has difficulty staying in business.

The most glaring example of waste in our society — overpackaging.

Nevertheless, the consumer pays to be persuaded to buy. What are the options available? First, fully conscious that we are paying to be persuaded and also, ultimately, for disposal, we can continue as before. Alternatively, the consumer can deliberately ignore the blandishments of advertising and, when contemplating purchase, concentrate on the salient features: ingredients, net weight, easily disposable packaging, and, after purchase, on the acid test, quality. Businesses thrive on supplying what customers demand. If the consumer demands more or better ravioli and less-fancy packaging for the same price, then that is what the manufacturer will provide.

The expression used in marketing to designate the power of the individual to get what he or she wants is *consumer sovereignty*. If we allow ourselves to be manipulated like puppets we have abdicated that right and have put the power into the control of the advertisers. The customer is always right, because the seller exists, as such, only to satisfy the customer's needs.

Selective buying simply shifts the problems of waste back from the customer to the producer, and finally annihilates those problems.

Relatively few individuals have no influence on anyone else. Although the main emphasis of RICH is not missionary in nature, its *gospel* can best be spread through a community by the example of the few who have become aware of the inefficiency of present consumption habits.

Individuals can reduce the proportion of waste in the throughput process in three distinct ways:

- **By Selective Buying**

The influence of individuals exercising consumer sovereignty reaches back around the throughput cycle to shape the production process. If the customer refuses to buy shoddy, badly constructed goods and leaves them on the shelves, quality and durability will quickly become the watchwords of the retailer, the wholesaler and the manufacturer. If goods which are energy wasters or are impossible to repair when damaged or worn are rejected outright — before purchase — nobody will make them. Selective buying simply shifts the problems of waste back from the customer to the producer, and finally annihilates those problems. Undoubtedly there is a price to be paid. Energy-efficient appliances, for example, may demand more sophisticated design, skilled workmanship, scarcer materials, and thus could cost more at the retail outlet. The customer, however, gains in energy savings, reduced pollution (even if it is only noise from a cheap refrigerator), and the time and energy otherwise involved in repairs or disposal and replacement. The purchaser must also invest time in selective buying and consult consumer reports which set out clearly the expected performance, energy efficiency, guarantees, and ease of repair of goods currently on the market. (Incidentally, if these reports were more widely used they would become cheaper and, at the same time, more effective in reduction of waste).

In a way, the sensible desire to invest wisely over the long term is inseparable from the responsibility to reduce waste.

If the customer refuses to buy shoddy, badly constructed goods and leaves them on the shelves, quality and durability will quickly become the watchwords of the retailer, the wholesaler and the manufacturer.

One of the psychological results of the general acceptance of the throwaway culture is diffidence on the part of the consumer about demanding any standard of performance from goods purchased. If we allow useless articles to take up space in attics, basements, and closets, we are depriving the retailer, wholesaler, and manufacturer of valuable information and encouraging more wasteful production. In a way, the sensible desire to invest wisely over the long term is inseparable from the responsibility to reduce waste.

A less obvious aspect of selective buying is resisting the lure of fashion, particularly in clothing. If individuality, even eccentricity, in dress were encouraged rather than frowned-upon, a triple benefit would result. Life would be visually more varied and stimulating, clothes would be made to last longer and to be aesthetically pleasing, and we would have more living space.

• By Efficient Use

This is the most obvious and fruitful area for the Reform of Inefficient Consumption Habits. Although consumption takes place everywhere, the most generally applicable examples are in domestic consumption — and especially in nonluxury goods such as water and electricity.

Water

Profligacy with water can be attributed to a deep-seated but mistaken belief that water is in limitless supply. This is one of a set of paradoxically strange notions: the more it is held that water is abundant and should be used accordingly, the scarcer the water becomes. The belief, in time, self-negates. Even residents of water-rich areas should use no more than they need if only because channeling, piping, and purification cost money, energy, time, and labor.

Water is not destroyed in use; it is polluted. Only a very small proportion of an industrialized society's water requirement is for drinking or for watering crops; most of it is used for cleansing and for the production of hydroelectric power. In areas where water itself and/or the resources required to decontaminate it are scarce, the strategy would seem to be to use, and thus pollute, less of it in the first place. Is that possible?

Even residents of water-rich areas should use no more than they need if only because channeling, piping, and purification cost money, energy, time, and labor.

"Cleanliness", it is said, "is next to godliness". If so, it comes a very poor second (except of course for the ungodly). There is no question, however, that North Americans have a preoccupation, if not an obsession, with being clean. A clue to the psychology of this phenomenon is found in the story of the newly immigrated European on his first trip *home* who proudly boasts, "We Canadians shower twice or three times a day", — to which his father replies, "You must get yourselves very dirty."

Water waste usually occurs where more water than is necessary is being used: in showers where only a small proportion of the water actually washes the body; or in cleaning vegetables and fruits, which can actually be better accomplished by steeping briefly; or in car washing, which when done in the driveway with a bucket needs about a hundredth part of the water flow used in automatic car washes; or in lawn watering, which uses on the average about four times the amount that is good for the grass. These are examples of water-waste on the part of individuals but some industries are equally guilty — and on an even larger scale.

Electricity

Electricity, like water, is taken for granted. It is not in limitless supply. Indeed, if the current fears of running out of fossil fuels are well founded, electricity as a substitute may soon be required in much greater quantities for such purposes as home heating and transportation. When it is realized that it is just as convenient to conserve electricity as it is to use it, several simple practices are obviously indicated — • Turning off lights and television sets in empty rooms — and even in empty houses. The notion that burglary is prevented by leaving them on is so widely held that burglars too must be aware of it. • Turning off ovens and burners on electric stoves when sufficient heat can be retained for long enough to accomplish cooking. Nutritionists are in agreement that we overcook vegetables to the point of losing substantial food values. • Filling electric kettles only to the level immediately required. • Using air-conditioners only when necessary for comfort. • Realizing that the purchase, transportation, storage, and repair of such gadgets as electric toothbrushes, back scratchers, massagers, and can openers often take more money, time, and trouble than they are worth.

It is just as convenient to conserve electricity as it is to use it.

• Re-Use and Careful Disposal

From 1920 to 1970, garbage production per person per day went up from perhaps one-half pound to about five pounds and the increase is continuing at the same or even a higher rate. Yet, there is no evident increase in happiness associated necessarily with the rise in garbage production per person.

We can stop looking at garbage as something dirty to be taken out of sight as quickly as possible and consider it instead as second-cycle material, in most cases having a positive rather than negative value.

Some of our more inefficient disposal habits can be reformed by using a little imagination. Almost anything made of wood, metal, glass, leather, plastic, cardboard, cloth, or paper can be adapted to some second use: non-returnable bottles can be collected at glass-recycling depots; newspaper and clean paper packaging can be recycled; organic materials (mainly food waste) can be used as garden compost; and so on.

What is being proposed here is something more subtle and certainly easier than a change of basic ideals. It is only a shift in perceptions. We can stop looking at garbage as something dirty to be taken out of sight as quickly as possible and consider it instead as *second-cycle material*, in most instances having a positive rather than negative value.

RICH can, as the very name implies, make us richer in a subtler sense than does sheer accumulation of unneeded material goods. The sacrifice required is only a little time, care and attention applied to rationalizing our consumption behaviour: the potential reward is considerable — energy and materials made available for truly necessary or desired purposes, cleaner air, water and soil and, probably most important to us as individuals, a satisfying sense of interacting intelligently with our environment and institutions rather than being controlled by them. •

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Energy Conservation: Is Education or Marketing Required?

Margaret Ellison
and
Robert A. Ellison

The *energy problem* is so all encompassing that *a* solution does not exist. In the struggle to develop technological solutions, one option, which could be a key source of energy, is often overlooked, underemphasized, or classified as someone else's responsibility. Yergin (1978) calls that source *conservation energy* and illustrates, with research compiled by the Harvard Business School Study, that its cost is competitive with other energy sources. It, therefore, should be acknowledged and actively pursued rather than depending upon technological fix(es) to be developed.

Few will deny that conservation energy is a worthy objective. It will not, however, be produced automatically by mere acknowledgement. If conservation energy is to be produced, barriers which prevent that happening must be broken down. We suggest that the home economics profession has a role to play. It should identify how it can be involved in the conservation energy production process and the conserver options available to society: doing more with less; doing the same with less; or doing less with less.

The initial barrier, which needs to be recognized before other barriers can be overcome, is that conservation energy is less tangible than the traditional sources of energy such as coal, wood, oil, and gas. As a result of its character production cannot happen in a central unit, nor can its production be controlled through centralized institutional programs and policies. The consumer ultimately determines productive conservation by day-to-day decisions made in satisfying physiological and psychological needs. Consequently, the production of conservation energy is a fragmented process which verges upon being mundane.

As a result of the above characteristics, enthusiasm for scientific energy conservation oriented research has been slow to be ignited and the behavioral component of consumer acceptance of energy conservation still needs to be explored from interdisciplinary perspectives, not merely transdisciplinary or disciplinary vantage points. Although the Canadian government has initiated policies and

There is an energy problem. Solutions to that problem require that consumers' attitudes and behavior change. The home economics profession can apply its management skills to managing such changes. Through acknowledging the fact that: (a) education is more than information dissemination; (b) education is but one facet of a greater process; and (c) the profession is an *in place* network of channels which extends across business, government and educational institutions, appropriate programs, activities, and policies may be encouraged and/or developed. These channels can provide a means of reaching groups and individuals within the profession as well as specific types of consumers and influence and/or evaluate their attitudes and/or behavior. The marketing process and some of its tools are presented along with a model of the marketing process and features the home economics profession as the change agent in the process of promoting energy conservation and thus promoting conservation energy.

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programs to encourage energy conservation, more comprehensive action is required simultaneously to make consumers, private, business, and institutional, aware that the energy problem is not a hoax and that actions taken individually will be beneficial. A final barrier is the fact that traditionally our society has not looked favorably on dampening demand. It is assumed that ever increasing energy use and economic growth are tightly linked. Proponents of the maxim, "Let the market do its work", believe that higher prices will eventually increase conservation and thus increase the energy supply.

In contrast to these institutional, physical, social, political and economic barriers, there are catalysts present which can enhance the production of conservation energy. The idea that conservation energy is a quality energy source which "does not threaten to undermine the international monetary system . . . and . . . can stimulate innovation, employment, and economic growth" (Stobaugh & Yergin, 1978, 137) is growing as it is validated through the results of a diversity of private and public activities. The atmosphere of the eighties, parented by the environmental concerns of the sixties and the consumerism of the seventies, plus the advent of concern about limited energy resources, will be more consumer oriented. No one will be exempted from making decisions relative to energy consumption. Hence, the energy *problem* will serve as a force which unites public and private consumers in a common situation, one to which the solution will depend upon the degree of human-orientation in the process. That human-orientation may be expanded by the home economics profession as individuals in the profession go about their occupations in the home, institutions and the business community. It is an in place network which should be used as a catalyst for change.

Management of resources in the home has been a fundamental activity in the evolution of the home economics profession. Change management, change to a conserving society is closely related to home management. Commitment to the ideal that quality of family life in this decade rests upon change throughout the family's ecosystem and that it needs to be and can be managed should not be the exception within the home economics profession. Conservation energy will be produced in the home . . . and school, and hospital and other places of business.

Will the *barriers* or *catalysts* triumph in the endeavour(s) to produce conservation energy? We feel that the answer to that question rests upon answering another question, "Is education or marketing required?"

Educational efforts are required to encourage the practice of conserving energy if beliefs, attitudes, values and behavior of Canadian society are to be altered. But, society is a rather amorphous entity, which is difficult to manage and change unless divided into more select units. Consequently, we feel that education is only part of the task ahead and suggest that educational programs will assist in realizing the value of conservation energy if conservation energy is treated as a product to be marketed.

Marketing has been broadly defined as *the creation* and delivery of a standard of living to society, and more specifically as "a total system of interacting business activities designed to plan, price, promote and distribute want-satisfying products and services to present and potential customers" (Stanton, Sommers & Barnes, 1977, 5). Marketing is more than *selling*. It is a process which may be used by profit and non-profit agencies to manage resources and bring about change. In recent years, with the rise of consumerism, marketing management has been broadened to include consideration for the social consequences of its planning, pricing, promoting, and distribution of products and service to satisfy consumer wants (and needs). The terms *social marketing* or *change management* are commonly used to describe such processes.

Therefore, having acknowledged the social dimension(s) of the product, conservation energy, and the potential for and obligations of home economists to be catalysts for change, we suggest that they apply marketing logic within and outside the profession as they sell conservation energy. The framework presented in Figure 1 is a hypothetical example of how the profession could relate to the process, nationally and provincially.

Through research and planning units, environmental factors are monitored and used to formulate short and long-range plans. Thus target groups are determined, channels of communications and distribution identified and appropriate programs developed, delivered and evaluated. Really an educational process developed for a larger classroom and several grade levels. The process outlined is not meant to be all inclusive but rather is an example of a range of possible options and an outline plan to maximize target groups response.

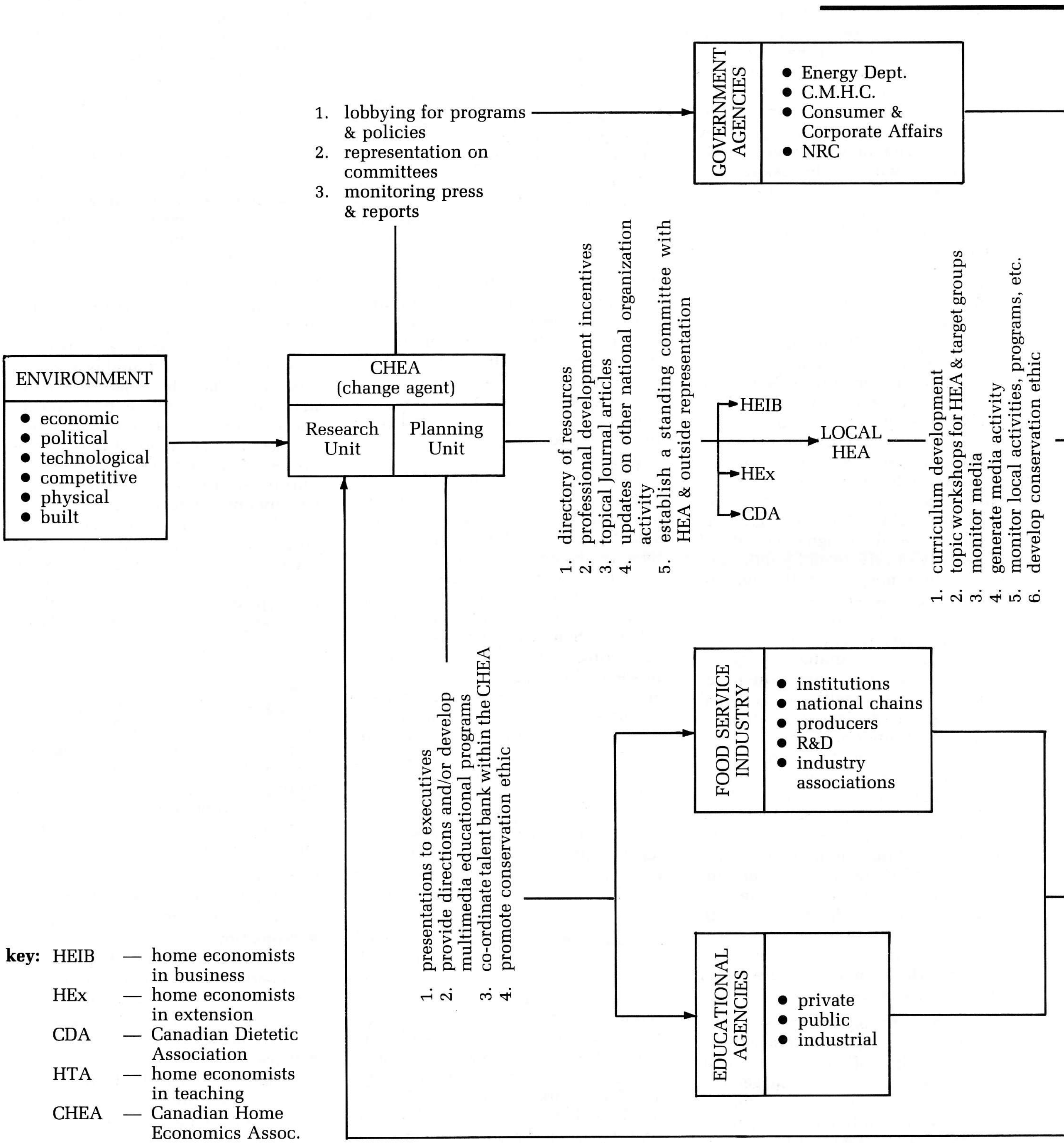
It is intended merely to give direction and leaves the *how* to the ingenuity and inspiration of the people, the place, the time, and the agencies that could become involved.

The amount of conservation energy produced will depend upon several types of social change, and in planning consideration should be given to whether or not the objective was to manage cognitive change, action change, behavioral change, value change or one or more of these possibilities. For example, programs for public education, or information, usually only increase comprehension but do not change any deep-rooted attitudes or behavior. Action changes involve time and expense for consumers. Hence, programs to encourage that type of change require incentives and a support system which makes it easy for target persons to carry out action.

More prolonged change in behavior requires a program with several strategies to establish an entirely new behavioral routine that will triumph over old habits and be more than a one-time action. The four P's of marketing can be used in developing such strategies:

- **Product**
  - Develop processes and products which are energy conserving
- **Promotion**
  - Increase understanding that the energy shortage is not a hoax
  - Create pride in being more energy-efficient, i.e. sense of social responsibility
- **Place**
  - Make it easy to find information that is meaningful
  - Regulate energy usage
- **Price**
  - Reward conservation practices
  - Raise the cost of energy, i.e. time-of-day pricing

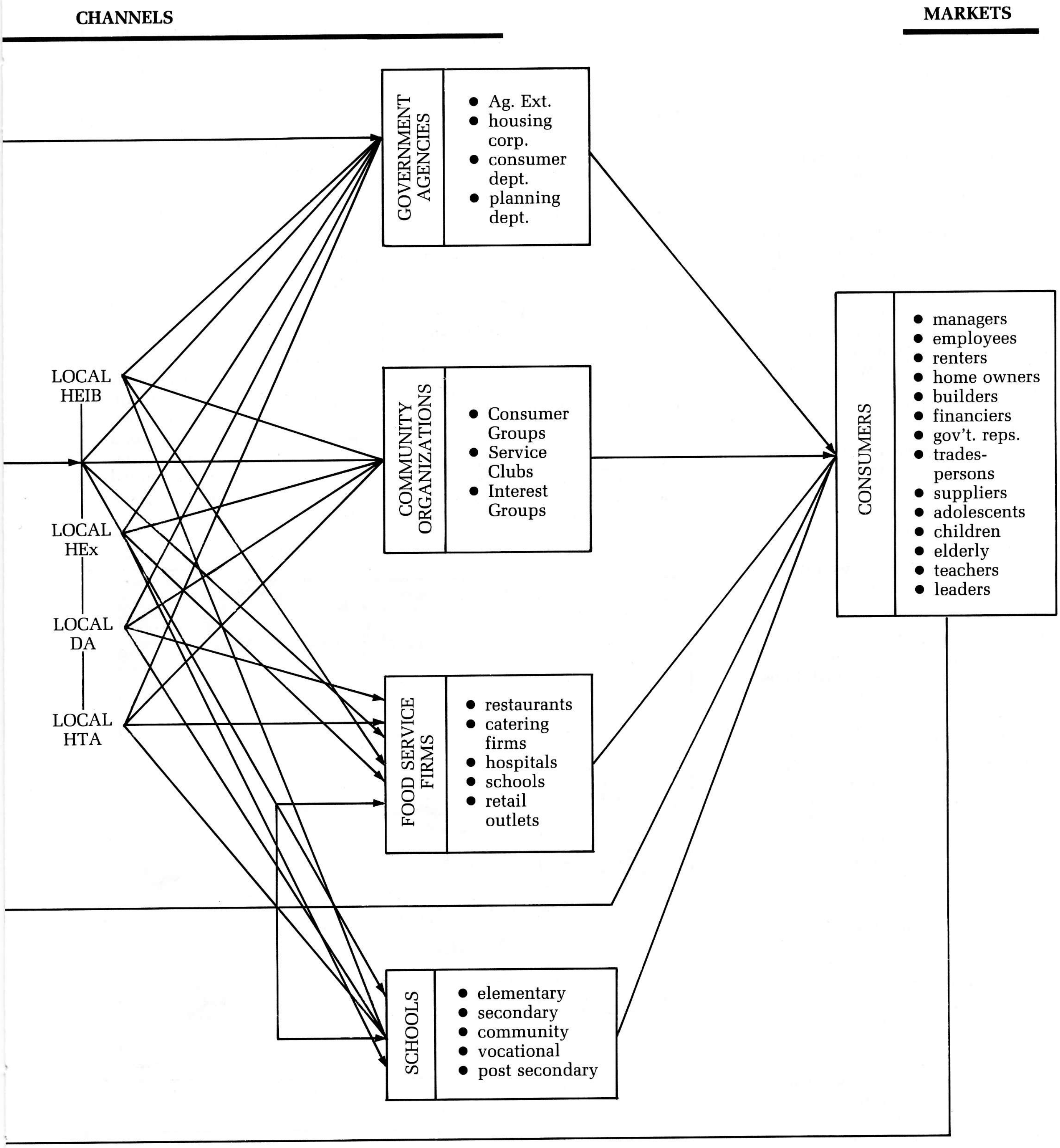
Figure I: Marketing Channels and Tools: Conservation Energy*


GOVERNMENT AGENCIES
Energy Dept.
C.M.H.C.
Consumer & Corporate Affairs
NRC
1. lobbying for programs & policies
2. representation on committees
3. monitoring press & reports
ENVIRONMENT
economic
political
technological
competitive
physical
built
CHEA (change agent)
Research Unit
Planning Unit
1. directory of resources
2. professional development incentives
3. topical Journal articles
4. updates on other national organization activity
5. establish a standing committee with HEA & outside representation
HEIB
HEx
CDA
LOCAL HEA
1. curriculum development
2. topic workshops for HEA & target groups
3. monitor media
4. generate media activity
5. monitor local activities, programs, etc.
6. develop conservation ethic
1. presentations to executives
2. provide directions and/or develop multimedia educational programs
3. co-ordinate talent bank within the CHEA
4. promote conservation ethic
FOOD SERVICE INDUSTRY
institutions
national chains
producers
R&D
industry associations
EDUCATIONAL AGENCIES
private
public
industrial

key:

HEIB	—	home economists in business
HEx	—	home economists in extension
CDA	—	Canadian Dietetic Association
HTA	—	home economists in teaching
CHEA	—	Canadian Home Economics Assoc.

* Adapted from Kotler P., *Marketing for Nonprofit Organizations.* Engelwood Cliffs N.J.: Prentice - Hall, Inc., 1975


CHANNELS
MARKETS
LOCAL HEIB
LOCAL HEx
LOCAL DA
LOCAL HTA
GOVERNMENT AGENCIES
● Ag. Ext.
● housing corp.
● consumer dept.
● planning dept.
COMMUNITY ORGANIZATIONS
● Consumer Groups
● Service Clubs
● Interest Groups
FOOD SERVICE FIRMS
● restaurants
● catering firms
● hospitals
● schools
● retail outlets
SCHOOLS
● elementary
● secondary
● community
● vocational
● post secondary
CONSUMERS
● managers
● employees
● renters
● home owners
● builders
● financiers
● gov't. reps.
● trades-persons
● suppliers
● adolescents
● children
● elderly
● teachers
● leaders

The success of such strategies would have to be evaluated against their feasibility, effectiveness and possible trade-offs. Strategies to influence behavioral change should consider changing bad habits as well as preventing bad habits from developing.

Finally consumers may be encouraged to change their value orientation. Experience has taught us that this requires an intense and prolonged program (Kotler, 1975). To encourage consumers to apply a conservation ethic in their daily activites will not be easy. Recently, however, it has become a pragmatic alternative which may be more readily cultivated. If such a change in values does not happen voluntarily then behavioral conformity may have to be legislated. Prior to this time, as well as after, efforts to build a favorable climate and an understanding of energy conservation should be made.

By grouping energy consumers and working to influence these segments to conserve, or understand why they do already, home economists can be part of the total effort to produce conservation energy. Gilly and Gelb (1978) suggest that those wanting to market the idea of conservation energy ask these questions:

- Can the segment be identified?
- Is the segment accessible?
- Is the segment large enough to be worth a distinct effort?
- Will the segment be responsive to a distinct marketing program?

Segments may be determined upon the basis of: 1) state-of-being, social or demographic characteristics; 2) state-of-mind, feelings about energy, conservation or innovation philosophy; 3) usage, heavy user or light user; and 4) benefit, saving money or saving energy.

The home economics profession has many options which may be pursued. Several strategies may occur simultaneously. The process framework outlined illustrates national and local, collective and individual, business, volunteer and institutional involvement. We said earlier that the production of conservation energy cannot be centralized, it is going to be the product of consumer decisions based upon a conservation ethic. The home economics profession can increase its contribution to that production process(es) by using the marketing process and tools to encourage not only a materialistic standard of living but a standard of life for Canadian families which has equal or better quality in the future in a resource scarce world. ●

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Fundamental knowledge of the sun and wind as energy sources is now highly developed; no big breakthroughs can be expected (Hottel, 1971). Wind technology was highly developed and used for windmills, and the knowledge is still available. Neither can research be expected to provide important new knowledge related to solar power. The solar constant has been measured many times, and measuring it a few more thousand times cannot change it. How to construct new houses to take advantage of the sun as a heating supplement has been understood for decades. The limits to be expected in the efficiency of conversion of the sun's energy by way of photosynthesis (Calvin, 1976) or with photovoltaic cells are well established. Largely because of the second law of thermodynamics, solar energy can make only a limited contribution to future energy demands.

W.E. Harris
New Trail 33(4), 1978

Courtesy of E. Uluschak and the Edmonton Journal.

"Of course I believe in solar power — every winter we head for Hawaii and store up solar energy on the beach."

Deadline for submission of articles or items for the next *CHE Journal* is **October 15, 1980.**

Communication Competencies of Home Economics Graduates

Wanda Young

The purpose of this study was to consult home economics graduates who work with families as to the communication competencies they used. The Delphi method was used to assess the competencies and to obtain consensus. These data were one source of information to determine objectives for courses in communication in a college of home economics. The study reported here was part of a larger study to determine communication competencies for graduates from professional colleges.

Background of the Study

Wilson (1977) believed that a profession must determine the competencies of its practitioners to assure quality service. The profession of concern in this study was home economics, especially the family studies area. Communication, human development, and integrative processes were the family studies curricular components for home economics graduates derived by Young (1977). It was suggested by Kennicott and Schuelke (1972) that educators identify the communication skills required for different careers, and develop courses to teach these skills. This study makes a start towards communication courses for home economics careers.

In this review, the definitions used for competency and communication will be described. The literature for home economics competencies will be reviewed along with the literature of the Delphi method as it has been used for educational purposes.

Communication: A Definition

In this study, communication was defined as the process of sending and receiving messages. The message might involve the senses of sight, sound, or touch. Butler (1978) explained that communicating is organizing ideas logically and persuasively, in all modes of expression or channels, to share with others. The media used to share the messages, in this study, were defined as systems for conveying messages through reproducible and self contained programs, such as television, radio, or the press. Key words related to communication were: audio, oral or verbal, non-verbal, organizational, visual, and written.

Competency: A Definition

Definitions of competency from Block (1978), Spady (1978), Nardine (1977), and White (1959) were integrated to provide the definition: a competency is an attitude, behavior, knowledge, skill or understanding used to deal creatively and constructively with the environment one perceives. In this study, the behaviors were those of the communication processes used by professional home economists in their work and experience with families.

Home Economics Competencies

The literature reviewed recommended competencies for some of the occupations found within the home economics profession. Most studies included one or more communication competencies. Home Economics Teacher Educators of Pennsylvania (1976, 1978), Campbell (1977), and the Texas Curriculum Report (1977) made recommendations for teachers. Katrba (1978) identified competencies for dietitians. Home Economists in Busi-

Abstract

The purpose of this study was to determine which communication competencies the graduates from a college of home economics found most useful in their professional work. This knowledge will assist in the development of course objectives for communication courses and professional development sessions. A modified Delphi study was used to determine 33 competencies. Thirteen objectives were determined by factor analysis with varimax rotation of the Round Three data. Most highly rated were the ability to converse in professional, business, and social situations; to speak in public; to practice the strategies of presentation, and the process of evaluation of communication; and to understand organizational behavior.

Résumé

Le but de cette étude est de déterminer quelles sont les capacités de communication que les diplômés d'une école d'économie familiale trouvent les plus utiles dans leur travail professionnel. Une telle connaissance aidera au développement des objectifs des cours pour les cours de communication et les sessions de développement professionnel. On a utilisé une étude "Delphi" modifiée pour déterminer les 33 capacités. Treize objectifs furent déterminés par une analyse factorielle à rotation varimax des données de la Série trois. Les mieux évaluées furent l'habilité de s'exprimer dans des situations professionnelles et sociales et dans les affaires; de parler en public; de pratiquer les stratégies de présentation et le processus d'évaluation des communications; et de comprendre une attitude organizatrice.

Dr. Young is a professor at the College of Home Economics, University of Saskatoon, Saskatchewan.

ness (1976) made suggestions for careers in business, identifying communication competence as the most important responsibility. Rossman and Bunning (1978) provided a list of the highest priority skills for adult educators. Hotchkiss (1977) and Barry (1976) enumerated competencies for those preparing to work in clothing and merchandising fields. The Nutrition Education Society (1977) and Poolton (1977) included competencies for nutritionists. Duehn and Mayndas (1975) made recommendations for those in social service and counseling. Helmer (1966), Lockwood (1975) and Mitroff (1976) made observations useful to those in university teaching and research. Wagschal (1978) and Spitze (1976) made recommendations for educational programs in the future.

The Delphi Method

The Delphi method has been identified as a futures research method. It was developed from the operations research of World War Two. Olaf Helmer (1966) a major writer about the Delphi method, used the opinions of subjects working in technical fields to predict change, permitting these subjects to revise their predictions and come to consensus in three rounds following an initial open-ended question. Judd (1973) suggested several educational applications of the Delphi method including: cost-benefit analysis; curriculum and campus planning; determination of college educational goals and objectives; consensus on rating scales, values and other evaluation elements; and the determination of future goals. Weatherman and Swenson (1974) reviewed the literature of educational uses of the Delphi method. The Delphi technique permitted consultation with many persons and varied groups of people separated geographically. The method was used to determine policy and to establish behavioral and instructional objectives when the topic was complex, as in the case of communication. Dalkey and Rourke (1971) used the Delphi method to determine educational values, one of which was communication which was described as relating to others, making social contacts, and developing social skills.

Competencies have been determined by the Delphi method for at least 15 disciplines, including teacher educators (Buff 1975), counselors (Falek 1971), dietitians (Katrba 1979), and librarians (Otto 1979).

Because graduates in family studies from colleges of home economics work in many fields and because communication is a complex process, the Delphi method was selected as the procedure in this study.

Procedure

The Delphi method was used to survey graduates from a college of home economics. Random selection was made to secure 200 subjects from the graduating classes between 1962 and 1972. The response rate was 51%, 55.5%, and 46.5% in the three rounds.

The Round One questionnaire included three open-ended questions about the competencies used to communicate with peers, clients, and the public. Content analysis of the answers was used to develop 22 objectives for communication courses, using the wording suggested by the subjects. In Round Two subjects were asked to rate these objectives using a five point Likert scale, and to suggest additional items. Round Two data were analyzed for means and Spearman Rho statistics were used (University of Alberta package) to determine the median and interquartile range, which were used to determine the degree of consensus. Round Three included a visual and statistical report and additional objectives supplied by the subjects, to make 33 items. Subjects were asked to join consensus or give reasons for not so doing. Round Three data were analyzed by factor analysis with varimax rotation to reduce the data (Kim and Mueller, 1978) to 13 objectives, six of which were factors which will be referred to as complex competencies or complex objectives. These objectives were rank ordered according to means.

Findings

Graduates who had been working professionally for more than five years identified many competencies they used in their work with families. These competencies were written as objectives which were summarized and ranked according to means in Table 1.

Rated most important was the ability to converse. A comment made by a subject was that in both professional and family conversation, openness of conversation will build trust. The ability to converse is basic to interpersonal communication in business and professional situations with families, and in social situations.

Table 1.
Communication Competencies
Round 3 Ordered Means

Competency	Ordered Means
converse	1.11
oral processes	1.49
public speaking	1.57
presentation strategies*	1.67
evaluate: listen*	1.78
organizational processes	1.95
apply technology	2.07
written*	2.15
use media*	2.17
business writing	2.33
prerequisites — content*	2.73
prerequisites — processes*	2.73
second language	3.14

* complex factor with several sub-competencies

Interpersonal communication related to the second rating — oral processes. The kinds of oral process that should be understood and used in professional work and in the home were identified by the subjects in the Round One open-ended question as argument, complaint, opinion, persuasion, and questioning.

The ability to speak in public ranked third. Graduates used public speaking directly to address small groups, as in teaching, or large groups, as in addressing a conference. The ability to plan the speech, to speak concisely and with expression was important whether speaking to live audiences or using media. Many of the graduates recalled public speaking as a major part of their university courses in communication.

The fourth ranking objective was a complex competency identified as presentation strategies. It was suggested by subjects that graduates be able to select simple techniques which would permit a clear and complete statement of the facts being presented. The level of writing and speaking should be at a practical level, and meaningful to the audience. The knowledge might be geared to demonstrations, presentations with media, as well as teaching strategies, but organization of the material was important in order to appraise the effect. The respondents suggested that each presentation should be evaluated by self-evaluation, be critiqued by peers in class, have a grade assigned by the instructor, or receive a pass/fail grade, in that order.

It was suggested that evaluation be based upon continual improvement, evaluation by an outside audience, willingness to participate, or by use of a combination of evaluation devices to avoid bias. Evaluation was a complex objective ranking fifth. Items loaded on this factor included the ability to apply the principles of discipline to one's work and to assist others achieve self-discipline. The opportunity to criticize others should be provided, with training to be fair and constructive in the criticism. Perception of the actions, behavior, emotions, and facial expression of the person being evaluated should be analyzed realistically. The theory of listening, whether the situation be face to face, or in a small or large group, should be understood and applied in evaluating situations.

The objective regarding organizational processes was rated sixth by home economists. Professional training should provide the opportunity to experience such organizational processes as: committee work, making reports, understanding the barriers that may cause problems in organizations and the procedures that will facilitate group work.

The next objective related to technology. Home economics training is based upon science, which is the base for technology. As well as the basic sciences, the application of science in business and industry must be understood. Physical sciences are applied in the electronics of media and the chemistry of film and in the physiology of speech. Social sciences are applied in the process of communicating ideas and messages to others.

Although writing reports appeared in the objective for organization processes, most objectives related to writing competence loaded in the next factor. Kinds of writing that should be included in home economics training are related to writing documents, such as briefs to government that require knowledge of the political process and proposals related to change and policy making. In these documents and others that home economists produce it is important to know how to sell ideas. All presentations should be written creatively, whether they be policy making, non-technical, professional, or research reports. Another purpose for writing skills for home economists is to counsel clients. Counseling might be management counselor to a low income person, teacher educator to teachers, teacher to student, nutritionist to consumer. A final form of writing is that required when using media. Graphics and illustrations accompanying this writing should be well designed.

Next was a complex objective which included competencies related to the use of media. It was considered important by the subjects that the professional be able to letter, to plan and produce designs and displays appropriate to the topic and the audience. Media should be used for public relations to explain the knowledge of the discipline and to relate to professional peers, clients, and the public. Broadcasting on radio and television should be experienced with the help of media specialists who know the technical aspects of broadcasting.

Business communication should be included. The design and interpretation of business letters, manuals, complaints, and job descriptions should be stressed. The use of the telephone in business should not be neglected.

Next were two complex objectives which were related to prerequisites or integrated processes. All were from those items added by the respondents in Round Two. The first was called content prerequisites by the researcher. This included knowledge or experience with drama and the fine arts, studies from the social and behavioral sciences, and a knowledge of the resources of the profession. This was related to statements that communication classes should be taught either in the senior years of the program or every year.

The other complex was identified by the researcher as prerequisite processes. These processes might be included as learning experiences in the communication courses. How to promote the profession should be included as a public relations activity. A consideration of alternative choices and the consequences of decision-making which affect the future of the profession and trends in society is important for home economists. Management of people by persuasion, and command is another process. Learning experiences which provide the opportunity to organize thoughts, things, and people was the final item loaded on this group.

The last objective, considered unnecessary by many respondents, was the ability to write, to speak, and to understand a second language. Only a few respondents, who resided in an area with a dominant ethnic group other than English felt the need for a second language.

Conclusions

Some further study is required on the topic of communication competencies for home economists. This study was limited by the size of the population. Graduates from the 17 colleges and departments of home economics and consumer and family studies in Canada could be surveyed. With a larger population it would be possible to analyze the differences among the major careers in the profession. A panel of employers could be included.

The data from the other professional colleges in this study could be analyzed to determine whether there are different communication requirements for each profession. This would make it possible to decide whether a central communication institute is desirable for a university, or whether it is preferable that each profession train its own professionals in communication skills. As well, a comparison could be made of any differences between male and female respondents.

However, the present analysis is of interest to persons planning programs for home economists in formal and non-formal programs and for graduates considering professional development. Planners and professionals might consider those competencies related to the ability to converse in professional, business, and social situations, the ability to speak in public; the strategies of presentation; and the processes of evaluation, and of organizational behavior, as well as the other competencies outlined.

If a graduate from a professional college such as home economics is to provide leadership in society and to achieve success, communication skills are a necessity. Most important are the oral processes, especially conversation, carried out simply, with consideration for the other. ●

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Twinning?

Any group needing a little inspiration for their *twinning* projects should read "The Little Red Schoolhouse is Alive and Well in India," *The Financial Post Magazine*, May 24, 1980, 38-47. It's a real incentive to get going in CHEA and at provincial and local levels.

Reprints of research and general articles are available. Minimum: 50 copies. Orders must reach the business manager's desk within 30 days of publication.

HOME ECONOMICS RESEARCH JOURNAL

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IFHE Council Report to Congress Assembly

25 July, 1980

Manila, Philippines

The Council of delegates to the International Federation for Home Economics met July 18-19, and July 24, 1980 in the convention center, Manila, Philippines. For the first time, a report of the activities of the Council was planned for presentation to the Congress Assembly, July 25, 1980. ***Dr. Wanda Young,*** *delegate for Saskatchewan, Canada was invited to prepare and present the summary which follows.*

On July 18, July 19, and July 24, 1980, some 140 representatives, 116 with voting rights, representing 29 countries met in the International Federation for Home Economics Council. These persons will remember the swaying palmtrees and sparkling water of Manila Bay viewed during coffee breaks; the warmth of a Manila meeting room with failed airconditioning; and the noisy customs of Philippino weddings and coming out parties held in the next room.

The representatives appreciated the report of Mme. Odette Goncet, secretary general, noting the expansion of the secretariat, physically, into larger headquarter office space in Paris, and in the innovation of new projects in developing countries and increased contacts with international agencies.

In times of inflation, the work of the treasurer general has been difficult. My compatriot, Mme. Carmelle Therien-Viau indicated that an increase in fees was necessary. We all appreciated the contribution of 1834 pounds made by the home economists of the United Kingdom to the Solidarity Fund. To all Congress Assembly members the question is addressed: What can you do as an individual to improve the financial situation of IFHE?

Council members accepted with interest the invitations from Senegal to host the 1982 Council meeting and from Norway to host the fifteenth Congress in 1984. The venue for the 1986 Council will be Europe and the 1988 Congress will be held in North America.

The revised constitution proposed by committee members Elisabeth Croquison and Margaret Dalloway was accepted. The main changes included: structural changes, with the formation of five regions, each with a vice-president, and a president elect to be selected at Council, elected at Congress.

On Saturday morning, representatives formed discussion groups to consider "Home Economists as Partners in Rural Development with Policy Planners and Decision Makers." Mme. Marie Antionette Benderitter gave the report of the advance questionnaire and Dr. Maria Bustrillos, an FAO worker from the Philippines, presented a position paper on the topic. Major goals should be equity with growth, and people participation. The groups suggested that the problems of families be determined at the local level, that home economists be trained to plan and write project proposals; to communicate with confidence, and to conduct research in order to help people become capable of caring for themselves at every level. Twinning programs for the exchange of ideas and funding, and work in teams with other professionals should be encouraged.

Reports of standing committees were followed by discussion groups. Maija Jarventaus, chairman of the membership committee reported an increase to 206 members and 3163 associate members from 73 countries. An objective of 300 members, from 86 countries was set for 1982.

The educational program committee, chaired by Dr. Maria Thiele-Wittig, recommended that seminars be conducted prior to the 1982 Council and 1984 Congress to develop a common understanding of the framework of home ecomonics.

The resolutions committee chaired by Margaret Fitch, explained the purpose of resolutions and how to write them. Five were presented in advance on the topics of infant feeding, helping refugees, research, scholarships, and program issues.

Ruth Norman, the permanent delegate to the United Nations in New York reported that funds were available from UNICEF for local projects about children.

Mme. Ouillmata Dia, chairman of the committee on women recommended a study of where and how women participate in policy making.

Other committee reports heard included those from the committee on aging, committee on handicapped, the committee on women, the finance committee, the *Bulletin* committee, and the UNFPA committee.

Elections were conducted on July 24. Those who are Past Executive Committee Members welcomed members retiring from the Executive Committee into PECM. We know these members will continue to work for IFHE. On behalf of all assembly delegates I wish to thank President Monica Tupay for the sincerity and friendliness shown in her term of office. Monica believes in developing the potential of an individual or an organization. We note the increased contacts with other international agencies, and the development of regions and regional meetings. We thank Past-president Isabel Horne for her dedication through 12 years on the Executive Committee as well as Vice-president Maija Jarventaus, and Executive Committee members Elisabeth Croquison, Gilberte Darbre, and Correia Della Santa.

What role will home economists take in the years to come? What policy

(Continued on page 256)

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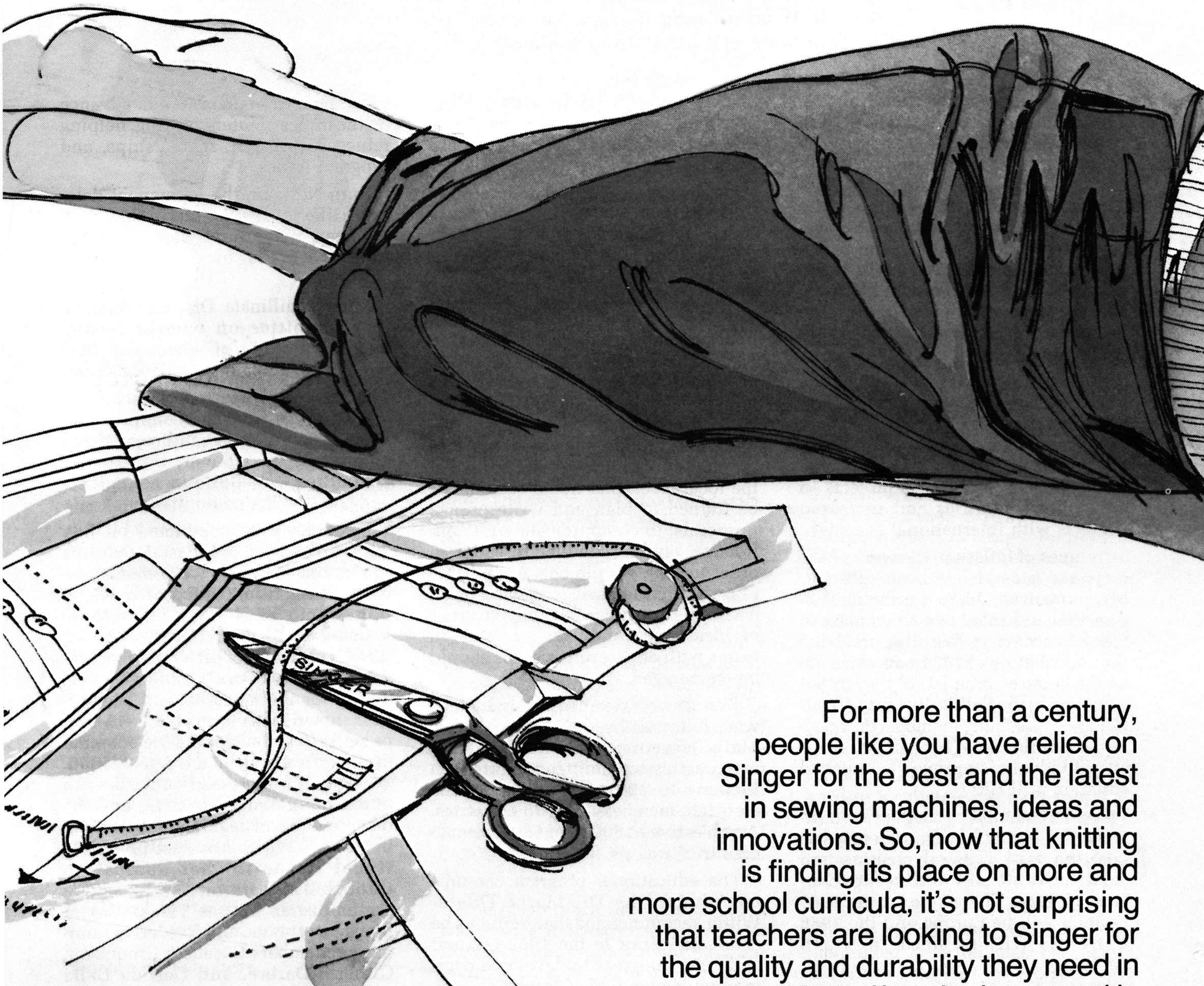

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Metric Conversion in Home Economics — Family Studies Classrooms

Isabelle Morrison
CHEA Metric Committee

"Metric conversion in the retail food industry was off to a good start this summer in three Canadian cities, Kamloops, B.C., Peterborough, Ontario and Sherbrooke, Quebec." Although this rosy statement appeared in the September 1979, *Metric Monitor*, we all know that metric conversion in those communities was not progressing as smoothly as that statement implied. Conversion of the retail scales brought to the surface latent consumer resistance to metric conversion since consumers were required to use grams and kilograms in order to purchase produce and meat. The change to metric units became an issue in the May, 1979 election. Therefore, it was no surprise that Ron Huntingdon, Minister of State for Small Business and Industry in the previous government announced postponement of mandatory implementation in the Retail Food Scale Sector for one year. He went on to say, however, that: "this decision obviously doesn't affect voluntary conversion programs."

Survey of Teachers

Metric conversion in elementary and secondary schools has been almost completed for programs which are not highly dependent on the retail market or the work world. In the spring of 1979, the metric committee of CHEA conducted a survey of elementary and secondary teachers of home economics to find out how much conversion had taken place in home economics/family studies programs. The survey was designed to obtain an estimate of the use of metric units in the areas of food preparation, clothing construction, consumer education and housing. In addition, teachers were asked to give reasons when metric units were used by students less than 50% of the time. They were also asked to identify specific assistance needed to help them increase students' use of metric units.

A short questionnaire, seven questions, was developed and sent to supervisors of home economics/family studies programs in all provinces. In British Columbia, the questionnaire was duplicated and sent to all the teachers of home economics. In most of the other provinces it seems to have been distributed in a few boards or districts, either at a meeting or by mail. In addition, it was printed in the Spring 1979 Newsletter of the Ontario Family Studies — Home Economics Association.

The response to this questionnaire was greater than had been anticipated. However the results should be interpreted with caution. In all provinces, except British Columbia, the responses were from a few boards or districts and therefore are not representative of a whole province. Since few responses were received from each of Newfoundland, Prince Edward Island, Quebec, the Northwest Territories and the Yukon, they were put together in order to avoid possible misinterpretation.

Reasons for Not Using Metric Units

The main reasons given for not using metric units more often in food preparation were: insufficient variety of metric cookbooks; still using favourite recipes which have not been converted, sometimes because of lack of time; cost of replacing cookbooks and equipment; lack of recipes for particular courses, foreign foods and quantity cooking, for example; concern about transfer from school to home when metric recipes were used; reluctance of local community, students and teachers to use metric units.

In the case of clothing construction, the reasons most often given were: machine gauges are in inches and replacement needle plates not available for older machines; fabric sold by the yard in local stores; some patterns in inches remain in the pattern books; teachers and students more comfortable with yards and inches; and reluctance to change.

The major plea was for resource material in all areas. Many teachers mentioned their reliance on current material as sources for recipes, comparison shopping and house plans. Some also mentioned the difficulty of locating material in French. In addition, some respondents seemed unaware of the materials that are available.

Factors Affecting Use of Metric in Schools

To some extent metric conversion in home economics programs is dependent on the extent of conversion in the retail market and the attitude to metric conversion in the local community. However, teacher attitude is also very influential. On the one hand, there are teachers who see their role as change agents. They look for materials which are available and use metric units wherever possible. Typical of this type of teacher is one respondent who said, "Clothing construction is now 100% metric thanks to the terrific organization of all pattern companies." On the other hand, there are teachers who are waiting for everything around them to be in metric units before making any changes. These teachers may not be members of the Canadian Home Economics Association and therefore may be unaware of its role, through the CHEA Metric Committee, in the conversion to the use of metric units. These two extremes are characteristic of reactions to change. Some people are open to change, have experienced satisfaction with past changes and accept that change is an ongoing activity. Other people are content with things as they are and see no need to change. Each person can be placed at either end of the continuum or somewhere in between. In the case of the conversion to metric, the teachers who are open to the change have looked for and found information and methods for including metric units in their home economics/family studies program. Those who are not open to change seem to be unaware of the materials available, and in a few cases even unaware of the decision to retain volume as the system for household measuring.

Conclusion

While few programs in home economics are totally in metric units, substantial progress has been made. It would appear that the change to the use of metric units when measuring has been easier to accomplish in clothing construction than in the other three areas. However, while metric units of measurement are also used extensively in the preparation of food, they are used less often in lessons in consumer education and housing.

Resources

- **HEALTH AND WELFARE, CANADA:** *Nutrient Value of Some Common Foods.* Servings are given in metric units and energy in kJ. Available through Provincial Departments of Health and local health units.
- **CANADIAN HOME ECONOMICS ASSOCIATION, 151 SLATER STREET, OTTAWA, ONTARIO, K1P 5H3:** In addition to other printed material, a resource list is available. It includes sources of information, equipment, supplies, recipes and teaching materials (order form on page 259).
- **CENTRAL MORTGAGE AND HOUSING, OTTAWA, ONTARIO, K1A 0P7:** Local offices in all provinces and territories. Class set of Housing Designs using metric measurements.
- **METRIC COMMISSION CANADA, P.O. BOX 4000, OTTAWA, ONTARIO, K1S 5G8:** Home Furnishings Information Kit — recently issued *Metric Monitor Reporter Newsletter.* Other items too numerous to mention here are available.
- **PATTERN COMPANIES** have wall charts on figure types. Both metric and imperial units are used.

Results[1]

When students are preparing food, to what extent do they use metric measures?

		Canada	N.S.	N.B.	Ont.	Man.	Sask.	Alta.	B.C.	Que. Nfld. PEI Yukon NWT
	100%	16	7	1	4			2		2
70%	75-100%	299	31	10	27		1	19	203	8
	50-74%	65	2	1	12	1	6	2	38	3
	25-49%	57	4		16	2	5		27	3
	1-24%	88	2	2	16	18	24		23	3
	0%	12	1	2	2	2			4	1
Total Replies		537	47	16	77	23	36	23	295	20

When students are selecting patterns and fabric and constructing a garment, to what extent do they use metric measurements?

		Canada	N.S.	N.B.	Ont.	Man.	Sask.	Alta.	B.C.	PEI Nfld. Que. NWT Yukon
	100%	11	5	1	2	1		1		1
81%	75-100%	225	20	8	41	6	16	12	112	10
	50-74%	138	15	3	25	10	4	4	74	3
	25-49%	56	2	2	6	5		1	37	3
	1-24%	24	1	2	4	1	3	3	8	2
	0%	5	1		1				3	
Total Replies		459	44	16	79	23	23	21	234	19

(continued on page 248)

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[1] Some respondents did not answer a question because they did not teach the area.

Appropriate Technology and the Home Economist

A Report on the Pre-Conference Workshop

Gwenna Moss

"Appropriate Technology and the Home Economist" was the theme of the third pre-conference workshop sponsored by CHEA's International Development Committee and partially funded by the Canadian International Development Agency (CIDA). Participants included:

- 13 students studying home economics in Canada. Countries represented were Nigeria, Ghana, Guyana, Jamaica, Venezuela, Peru and Hong Kong.
- three home management workers from the Northwest Territories, sponsored by the Federal Department of Indian and Northern Affairs.
- six staff members from the Saskatchewan Indian Agricultural Program, sponsored by the Saskatchewan Department of Agriculture.
- 40 home economists, many with experience overseas or in Canada's North.

Joanna Nsarkoh, Betty Feniak, May Maskow, Alice Jenner, workshop chairman.

The key-note speaker was Joanna D. Nsarkoh, Head of the Home Science Department, University of Ghana. Her talk included a description and pictures of the daily lives of rural women in Ghana and their need for appropriate technology. Mrs. Nsarkoh also described how her department's programs prepare home economists to work with rural women. She put the case for greater involvement of home economists in the development of appropriate technology as follows:

> As home economists we need to have a certain commitment to the development of appropriate technology. Unless the woman is freed from the drudgery of farm and housework, she is not going to be able to find time or energy to listen to or take part in our other programmes . . . e.g., nutrition, family life education, improved sanitation.

A panel presented three different dimensions of appropriate technology. Dr. Walter Currie, Assistant Director of the Gabriel Dumont Institute of Native Studies and Research, Regina, discussed issues related to technology and native peoples. The transfer of technology from the European to native cultures was described by Dr. Currie as "more a curse than a blessing to native people". With the exception of the steel blade, the horse and woolen clothing the European legacy has been largely negative: alcohol, the fur trade, Christianity, agriculture, the railroad, all of which disrupted native life styles. Native peoples were taught to want things, but not taught how to make them, resulting in a dependent, consumer society.

Some of the more than 50 home economists who attended the pre-convention workshop.

Dr. C. M. Williams, Head of the Department of Animal and Poultry Science, University of Saskatchewan, discussed the technological aspects of food production, distribution and storage in developing countries. He also commented on the role of the home economist:

> I believe we all appreciate that the home economist has not been put on the development team as often as is needed and I certainly would support their wider use. However, I place the same rider on that recommendation as I would for any other professional; they must be dedicated to their profession, have a high degree of concern for those they wish to assist, are prepared to adapt their skills to the local condition and above all are well trained and have experience before proceeding overseas.

Peggy Brunsdon, Information Officer for Saskatchewan's Office of Energy Conservation also presented a challenge to home economists.

> In the next decade the consumer society must become the conserver society. The home of the 1980's will undoubtedly reflect this. Whether or not the accommodation which must be reached will be reached without pain is precisely where all of you as home economists have a contribution to make. You are a key link in attitude changes in our society. Today, I would like to impress upon all of you the urgency of the work you have undertaken in terms of the public demand and the social need of your services.

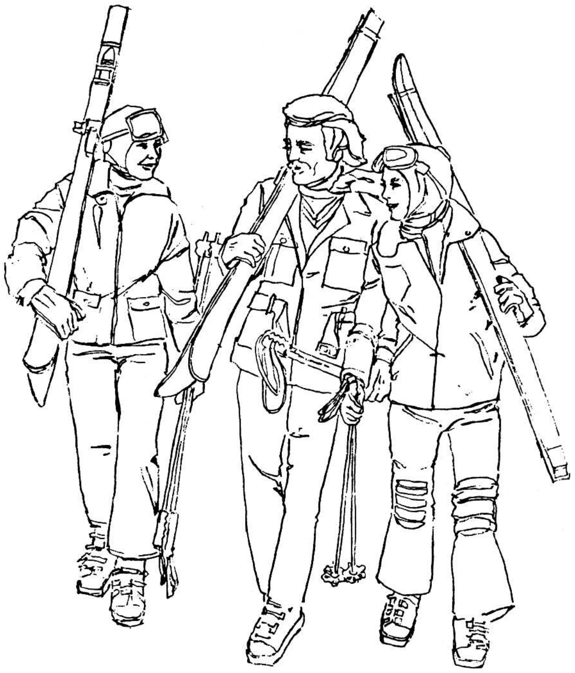
Participants joined one of five workshops: technology and native lifestyles; technology and food; technology and home economics curricula; women and technology in developing countries; and energy, technology and the home. Group discussion and recommendations focussed on the implications for personal lifestyle, for professional roles, and for action by professional associations. Recommendations included:

- Encouraging more contact between CHEA members and associations and home economics programs in the north and in native communities.
- Encouraging an exchange of newsletters and journals between Canadian associations and associations in developing countries.
- Developing a position paper on food additives.
- Establishing a committee to work on appropriate technology in the curriculum. More information on this committee can be obtained from Mary Zeldin, College of Home Economics, University of Saskatchewan, Saskatoon, Saskatchewan. S7N 0W0 Canada

The complete proceedings of the workshop will be available from the International Development Committee.

Physical Measures of Clothing Comfort:

A Literature Review



Janice Shivers

Abstract

Physiological clothing comfort refers to the maintenance of thermal balance — the relationship between body heat production and loss. Maintenance of thermal balance becomes a critical life-sustaining consideration in extreme climate situations and as such, has greatly stimulated research for the development of adequate clothing assemblies for military use. Protective clothing extends people's physiological limitations in response to environmental conditions. Understanding of the theoretical base of physiological clothing comfort is useful in assessing the appropriateness of conventional garments for specific activities and in determining the reasons for discomfort which may be experienced.

Résumé

Mesures physiques du confort vestimentaire: revue littéraire.

Le confort vestimentaire physiologique se réfère au maintien d'un équilibre thermal, c'est-à-dire la relation entre la production et la perte de chaleur par le corps. Le maintien d'un équilibre thermal devient une considération critique pour l'entretien de la vie dans des conditions climatiques extrêmes, et, de ce fait, a largement stimulé la recherche en vue du développement d'ensembles vestimentaires adéquats d'usage militaire. Un habillement protectif accroît les limites physiologiques humaines face aux conditions environnementales. Une compréhension de la base théorique du confort vestimentaire physiologique s'avère utile pour établir quels vêtements conventionnels sont appropriés pour des activités spécifiques et pour déterminer les causes d'un éventuel inconfort.

Janice Shivers is an assistant professor, Brescia College, The University of Western Ontario. She is a graduate of the University of Kansas and has an M.Sc. from the University of Maryland.

Clothing comfort may be defined in physiological or psychological terms. Although the two perspectives serve different goals, the impact of research findings intended for improvement of military gear has significantly influenced the design of athletic equipment and uniforms, and conventional winter clothing. The fashion industry has borrowed heavily from the abundance of design features, fibre blends, and fabric geometry which are used to produce a sophisticated, lightweight layering of fabrics within a single garment for the greatest efficiency of body heat and moisture transfer, e.g., ski suits and down-filled coats.

Physiological and Psychological Comfort

Physiological comfort refers to maintenance of thermal balance: the proper relationship between body heat production and loss. The extensive research dealing with physiological comfort has been a response to the need for protective, life-sustaining clothing assemblies for military use in extreme climate situations as well as in a variety of high-risk occupations such as firefighting and mining. It is obvious that in everyday life, physiological comfort is achieved by consciously choosing apparel from a wide range of styles and fabrics, adding or removing layers for greater warmth or coolness. Psychological comfort implies that individuals need specific garments, fabrics, colors and design features to help them feel confident and at ease within the context of the various roles they assume.

A general understanding of the theory of physiological clothing comfort is useful in assessing the appropriateness of conventional garments for specific activities and in determining the reasons for discomfort which may be experienced. The following literature review of physiological measures of comfort is not exhaustive, but is intended as a brief analysis of major concepts and research findings. The field of clothing comfort is multi-disciplinary and extremely complex. Three basic references will provide indepth discussions of basic concepts: Newburgh (1968), Fourt and Hollies (1970), and Hollies and Goldman (1977).

Environment and Individual Physiology

Four environmental factors affect comfort: air temperature, relative humidity, air movement, and radiant heat from the sun or other sources. Gagge, Stolwijk, and Hardy (1967) concluded that the unclothed body, sitting at rest, feels comfortable at air temperatures in the range of 28° to 30° C. The clothed body at rest or at work requires a cooler air temperature to remain comfortable, the exact temperature dependent on the level of activity and the type of clothing worn.

Relative humidity, as well as clothing worn, controls the efficiency of heat transfer from the body to the ambient air (outside the clothing assembly). "Evaporation at the skin is indeed slower into 25° C air at 100% relative humidity than into drier (50% relative humidity) air at that temperature . . . the drier air will evaporate water from the skin at one and one-half times the rate for the saturated air, other factors being equal." (Fourt & Hollies, 1970, 12).

Radiant energy exchange with the sun or with the surrounding environment (radiant heat source, heated walls, concrete, etc.) is an important factor in assessing thermal comfort in both warm and cold environments. Rees and Ogden (1944) demonstrated that for high-temperature radiation, radiation exchange was dependent on clothing color and on the type of dye used. The choice of colors for protection from sunlight has been studied by The United States Army Quartermaster Corps in Yuma, Arizona (Breckenridge, 1961). Fourt and Hollies (1970, 160) summarize the results of that research:

> In terms of the total heat load on the man, the differences with color represent increases of only 17% for black over white and 7% for green over khaki. The white uniforms had much less advantage than expected from reflective measurements, possibly because multiple reflections in the vicinity of folds and creases increased the amount of radiation absorbed.

Other environmental factors such as wind speed, rain and snow complicate the problem of thermal balance considerably.

Physiological responses to air temperatures and relative humidity which deviate from optimal comfort conditions help stabilize the deep body temperature at the 37° C. which is necessary to sustain life. The circulatory system controls the amount of body heat lost by varying the flow of blood to the blood vessels near the skin. In response to cold air temperatures, vasoconstriction reduces the blood flow near the skin surface to retain deep body heat. As the skin cools, creating discomfort, skin texture changes from smooth to rough (goose flesh) "which is capable of diminishing air movement across the skin and so improving air insulation . . . [A further nervous response to cold is] involuntary shivering which greatly increases heat production" (Newburgh: 1968, 125). In response to hot air temperatures, vasodilation carries more blood near the skin surface in order to dissipate excess body heat. When body heat exceeds the limit which can be dissipated through vasodilation, sensible perspiration occurs until thermal balance is achieved. One or a combination of four processes transfers the heat loss to the ambient air: conduction, convection, evaporation or radiation.

Clothing: An Extension of the Body

Fourt and Hollies (1970, 31) have described a clothing assembly as a "quasiphysiological system, an extension of the body which interacts with and modifies the heat regulating functions of the skin and has effects which are modified by body movement." The microclimate so created may range from a closed system trapping one or more layers of stationary air which provide effective insulation from a cold environment, to a controlled open system which allows heat transfer by means of convection. Some of this interaction is automatic in that it results from the physical properties of the clothing materials and their spacing around the body. The larger scale interactions, however, arise from conscious choice of the amount and type of garments worn and how they are worn: close or loose fitting, closed up tight or left open.

Clothing should be assessed according to thermal insulation, resistance to moisture transport, resistance to air penetration, thickness, surface area and weight (Fourt & Hollies, 1970, 15). The desired variation of each of these properties is dependent on the environmental parameters. The suitability of surface area and weight relative to environmental conditions is easily understood. Cold climates dictate the need for complete body covering of greater thickness whereas the opposite is true for tropical climates. Minimum clothing weight, regardless of environment, is preferable because of the greater physiological stress created by unnecessary weight. Thermal insulation, thickness and resistance to moisture transport and air penetration require more detailed explanations.

Thermal Insulation

Thermal insulation value is expressed in a nonmetric unit, the clo unit, which is "precisely stated in physical terms as 0.18°C m^2 hr/kg cal" (Burton & Edholm, 1955, 36). A corresponding metric physical unit, the thermal ohm (T-Ω), is also used in the literature (Nelms, 1964): "The T-Ω dimensions are °C m^2/W; the T-Ω can be considered as a thermal resistance which requires a temperature difference, in °C, to cause heat energy to go through it at the rate of 1W for each square meter.

Thermal insulation, a critical factor in a cold environment, is a function of fibre content, fabric construction, number of fabric layers, thickness of each fabric layer and air spaces between. Woven wool, because of its lofty, hairy surface quality provides better thermal insulation than other fabrics. The lightweight thermal insulation produced by down fillers offers a superior, although expensive, alternative.

Layered clothing generally has greater insulation value than a single layer garment. Each air space up to 5 mm between fabric layers is included in a tape measure method of determining clothing thickness; the thickness is then given an approximate clo value: 4 clo/inch or 1.6 col/cm (Fourt & Hollies, 1970, 30). "The clo value for the clothing [a man would] customarily wear today at work, i.e., light trousers and a long-sleeved shirt, is approximately 1.4 clo, including the external air layer at about 0.8 clo" (Hollies & Goldman, 1977, 8). The nude body has a limited amount of thermal insulation due to the air film layer created by the surface roughness and hairiness of the skin.

Heat Loss

Direct heat loss from the clothed body occurs as a result of thermal transfer through the clothing assembly to the ambient air by means of radiation, conduction and or convection (Spencer-Smith, 1977, 5). Indirect body heat loss in the form of sensible perspiration must pass through the clothing from the body surface and evaporate into the ambient air. All the environmental variables, the activity level of the person and the nature of the specific clothing assembly affect the efficiency of direct thermal transfer and moisture vapour transfer. Spencer-Smith (1976, 128) states that the transfer of body heat is far more complex than most research data indicate because of an "interaction between heat and moisture transfer as a result of the increased heat and moisture transfer through damp clothing and of the buffering action of hygroscopic clothing."

Ideally, resistance to moisture transport should be such that sensible perspiration is carried away from the body surface and evaporated, but rain and snow are not readily absorbed by the clothing. Rubberized fabrics may provide short-term protection, but are unsuitable for long periods because they are impermeable to persipiration (Spencer-Smith, 1978, 63). Trapped moisture in the clothing microclimate results in extreme discomfort and loss of body heat, and then excessive evaporative cooling when the permeable outer layer is removed.

Fabric hydrophilicity is the ability of the fabric to absorb and transmit water vapour. Natural fibres (linen, cotton, and wool) are hydrophilic; synthetic fibres are hydrophobic, but surface finishes can make them more absorbent. Although natural fibre fabrics are generally thought to promote more efficient vapour transfer, Pontrelli's (1977, 75) research data on athletic socks indicates that Orlon socks are more comfortable than wool or cotton socks because the treated Orlon socks transport sweat to the sneaker surface at a rate 2.5 times faster than the natural fibre socks, thereby keeping the feet drier.

Microclimate Ventilation

Under work or exercise conditions or in warm environments it is desirable to have limited and controlled exchange of microclimate air with ambient air in order to dissipate excess body heat and moisture and thereby maintain thermal balance. According to Crockford, Crowder and Prestidge (1972), factors which influence the rate of microclimate air exchange (inside the clothing assembly) are clothing permeability, wind speed, body movement, clothing design and fabric properties.

Fourt and Hollies (1970, 35) report that in testing an Arctic uniform, there is a point beyond which increased microair space does not provide more effective insulation. The larger spaces are, however, effective in "permitting more automatic decrease of insulation with increase of body motion." This cooling system is augmented by opening the garment at the throat, wrists and lower edge, thereby creating a chimney effect. Bellows ventilation was found to be more efficient when combined with body motion forcing convection currents through the microclimate.

Small openings within the garment do not demonstrate the same effect as large openings. Studies have indicated insignificant or minor differences as a result of insertion of vents in raincoats. According to Fourt and Hollies (1970), the fault probably is that the overall garment design is not sufficiently loose to permit air circulation within the clothing. Moreira (Moreira, Johnson, Belding, Wood & Stachelek, 1943) found loose ponchos to be less thermal burden than any raincoat.

Belding, Russell, Darling and Folk (1947) were the first to demonstrate the more effective ventilation properties of a loose-fitting Arctic uniform. A 50% reduction in the insulation effect of the uniform was obtained when tested on marching men, in comparison to no reduction when tested on men standing still or sitting.

Fourt and Harris (1968) state that fabric thickness, compressional resilience, flexibility and air permeability all affect heat loss and ventilation. Stiff fabrics promote a more effective bellows action whereas limp, flexible fabrics minimize microclimate air spaces and limit bellows ventilation. "The degree of stiffness required for good bellows action is considerable and the extent of this effect is highly dependent on garment design" (1968, 294).

Hollies, Fourt, Arnold, and Custer (1973) modified the trace gas technique developed by Crockford, Crowder and Prestidge (1972) and applied it to air mixing within nonpermeable firemen's coats. Their assumption was that the coats would be more comfortable and functional if air mixing could be promoted by the interaction of the clothing with the motions of the man wearing it, thereby creating an effective bellows action to help maintain heat balance and promote evaporative cooling. Results showed that the "chief factor preventing mixing is distance from the hemline or isolation in such an area as the sleeve" (1973, 24).

Placement of spacers in the upper back and shoulder area were introduced to test the possibility of increasing ventilation by providing additional openings at the neck, producing a "chimney effect." Spacers were found to be more effective in producing efficient air exchange under rest conditions than under exercise conditions, although exercise in a loose-fitting coat was found to accomplish much the same result (1973, 25).

Shivers, Yeh, Fourt, and Spivak (1977) used the nitrogen trace-gas technique to quantify microclimate/ambient air exchange using four conventional cloth coats, identical in materials and dimension except for variable sleeve design. Secondary variables were position of microclimate sample, degree of closure at waist and neckline and subject movement. Results indicated that increased microclimate volume in the upper arm as a result of sleeve design did not have a significant effect on air exchange efficiency because the additional inner space created by the widest dolman sleeve tested was modified by the fabric folding over itself under the arm when the coat was worn. A decreased inner back volume as a result of belting the coat produced more efficient air exchange in the back. A chimney effect introduced in the front by wearing the coat unbelted and open at the neck resulted in more efficient air exchange in the front only. Forced ventilation introduced through exercise (walking) greatly increased ventilation efficiency in all coat styles, especially in the back and front sampling positions, regardless of degree of closure. The data imply that ventilation efficiency may be influenced by microclimate volume: the larger the volume, the longer the time necessary for air exchange to occur.

Summary

Any conclusions drawn about the suitability of a clothing assembly for a specific end use are more valid if tested in wearer trials. Understanding of the theoretical base of thermal balance is, nevertheless, valuable. Slight physical discomfort such as chilliness, clamminess or feeling too warm is easily solved by a change of clothing or by adding or removing a layer of clothing. However, when physiological thermal balance is jeopardized, as in extreme climate conditions, properties of the clothing assembly as a life-support system become critical.

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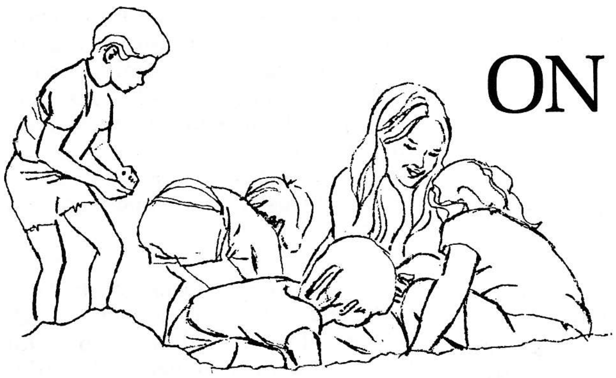
Taken as a whole, it appears that the renewable energy resources (water, sun, wind, biomass, et cetera) may reasonably contribute 2 to 5 percent of the energy we will require in the future. All these should be used to whatever extent is feasible. But if we compare this contribution with projected increases in energy needs for the future, clearly we must look to the nonrenewable resources — the fossil fuels and nuclear fuels — to be the mainstay for an industrialized society. There is unquestionably more coal than gas and oil still available to mankind, but all these are available only in limited supply — at most for a few decades. The fossil fuels cannot remain the principal energy source much beyond the end of the century, even if it were assumed that those currently alive on the earth have the right to exploit them completely, leaving none for their descendents.

The reserves of nuclear fuels are not well established. Probably the equivalent of ten to a hundred times as much energy is available from this source as from fossil fuels; many times more than this would be available with successful development of breeder technology, and enormously more if fusion technology can be developed.

W.E. Harris
New Trail 33(4), 1978



ON THE COMMUNITY FRONT

Marlene McDonald
Manitoba Provincial Director

Home economists in Manitoba have always been at the forefront in responding to individual, family and community needs related to their special areas of interest or expertise. With experience in many areas, they have been able to initiate, develop and implement a variety of projects, both short and long term. The valuable experience gained through home economics training and employment is clearly evident in their accomplishments.

○ **Ruth Dyker,** an active Winnipeg homemaker and a past president of the Manitoba Home Economics Association, became concerned several years ago with the problem of non-nutritious foods being sold in schools, through vending machines, cafeterias and canteens. After Ruth expressed her concerns at a MHEA meeting, it was decided to undertake a survey of food availability in Manitoba schools. With the assistance of the Manitoba Women's Institutes, the Dietetic Association of Manitoba, and the Manitoba Branch of the Consumers' Association of Canada, MHEA initiated the survey and found that the majority of food being sold was of a non-nutritious nature. A resolution was formulated and presented to CHEA encouraging similar surveys throughout Canada, using the results of such surveys as a basis for the development of programs to ensure nutritious food availability in the school system. Ruth's interest and concerns resulted in the involvement of many home economists and others in an enlightening and beneficial project.

Ruth has also been actively involved in reviewing MHEA's Constitution and in writing public relations articles for her local school board. Although she is not employed on a full-time basis, Ruth finds that her previous experience as a HEIB has been invaluable with regard to public relations, public speaking and media work related to her current activities.

○ This summer, Camp Wasaga at Clear Lake in Riding Mountain National Park is where you'll find **Sally Shwetz,** her husband Michael, and their three daughters. Sally's interest in supportive structures for families and in camping sparked the idea for the camp. Started by Sally and her husband in 1974, the camp is sponsored by the United Church of Canada. The camp welcomes families and single adults from infants to seniors and provides an economical program of activities for children and adults in a community atmosphere. According to the camp brochure, Wasaga is a place where you can find nourishment, caring, love, beauty, laughter, fun, support, fellowship, and a Christian community. A morning program of children's activities offers parents lots of free time to relax or organize their own activities. The camp is obviously filling a need for families as it is fully registered. Not one to sit back and bask in success, Sally started a retreat for women two years ago. This year's weekend retreat focused on stress and dealing with it in our lives.

○ CHEA's hardworking former secretary, **Barbara Baczynsky,** has been devoting much of her time over the past few years to volunteer activities with the YWCA. Barb's main area of interest has been the *YW Neighbour Program,* a weekly neighbourhood gathering for mothers and pre-schoolers. Designed to provide intellectual and social contacts for mothers and a play group for the children, the meetings feature discussions and guest speakers. Barb has been involved in the restructuring of the program to better meet the needs of members and was able to develop and encourage programs relevant to home economics areas and services.

○ Many native students from Northern Manitoba reserves are unable to obtain a high school education on the reserve. Teulon Residences Incorporated provides a home away from home for these young people while they finish high school and prepare for university or community college. **Rhoda Kernested,** a Teulon home economist, has served on the Board of the residence for the past three years. Students living in residence attend the Teulon Collegiate with local students. Many are homesick, experiencing culture shock and may be behind academically. Tutoring is provided for those with school problems and a student committee deals with problems in other areas. Although the program has been in operation for 20 years, in January of 1979, two new, well-equipped residences were opened. As a member of the Houseparent Selection Committee, Rhoda took part in the selection of a home economist to supervise the girls' residence. This individual's duties include meal planning, staff supervision, budgeting and administration — a job well-suited to a home economics background. As a home economist, Rhoda is concerned about families and individuals and the importance of life skills. Through her work with the Teulon residence, as a 4-H leader and as a member of the Christian education committee of her church, she has done her utmost to encourage and teach life skills to young people around her.

○ **Bea Jolly,** a Brandon home economics teacher, has been busy with the Girl Guides since 1951, both in the United Kingdom and in Canada. Bea served as Brandon Commissioner for six years and is presently in her fourth year as Assiniboine Area Commissioner. In addition to doing a great deal of public relations work with parents, guides and other groups, Bea has found her home ec. background helpful because of the many Brownie and Guide badges and challenges related to the home economics areas.

○ Four years of volunteer consumer broadcasting in Barbados kept **Glenora Slimmon** busy while her husband was employed there by CIDA. She also developed 4-H home economics clubs and applied nutrition groups while they were based there. A long time volunteer with the CAC (since 1947), Glenora has done research and served as a member of committees and executive groups. Glenora believes that home economists have a special responsibility in community activities and demonstrates her commitment through involvement in the Farmers' Market, the Consumer Co-op and in her church.

○ **Mary Kraim** of Dauphin fills much of her time with work on the *Parents' Committee of the Dauphin Legion Pipe Band and Highland Dancers.* Mary's background in textiles and clothing has been very helpful with regard to kilts and band uniforms. As there are no patterns, the committee has had to take apart old kilts to determine how to construct new ones. Visiting highland dance competitions and sketching competitors' costumes has helped the Dauphin group acquire needed knowledge for the present and to pass on to future committee members. Mary also chaired a one-day competition of highland piping, drumming and dancing involving over 250 competitors. Her acquired time and management skills were definitely an asset in this undertaking.

○ The Dauphin Legion Pipe Band also benefits from **Joanna Cooper's** fine efforts. She began the Robbie Burns evening to raise funds for the band. Dauphin residents will be looking forward to their fourth Robbie Burns evening in 1981. The Dauphin Ukrainian Festival is a popular summer event, highlighted by Ukrainian entertainment, foods and workshops. Joanna's special skills in Ukrainian cooking and language as well as project organization have made her contribution to the festival that much more important.

○ **Pauline Allard's** background in social work has broadened her insight into social needs within the community. As a board member of the *Adult Retarded Workshop Industries,* she did a survey which indicated a need for a Community Group Residence for Retarded adults in the Dauphin area. She also runs a book and craft shop at Clear Lake during the summer. The shop is an outlet for Manitoba crafts people to display their talents and sell their works.

The involvement of these busy volunteers indicate just a few of the community activities that home economists undertake. Their interest and commitment have resulted in needed change, new opportunities, and are an inspiration to others. ●

Communique from the Executive

Barbara Baczynsky

This is the time for transition between Executives. We trust that it will be an easy transition due to the excellent communications the executive has had with the president-elect via Conference-call Executive Meetings and the productive Board of Directors Meetings held in Saskatoon in July. It is information from these meetings that follows:

- The recommendations of the Task Force on National Conferences and the use of funds by committees of CHEA were presented and our association now has 1) a *written* policy for CHEA National Conferences; 2) a *Conference Manual* which is a working manual to be continually revised by subsequent conference committees; 3) a policy regarding the use of funds raised by a committee of CHEA.
- In order to obtain legal counsel on an ongoing basis, the executive has been empowered to retain legal counsel in the Ottawa area.
- To keep in tune with the time, the executive has been authorized to make a decision on the computerization of member information.
- The role of CHEA committees in the development of policy through position papers and resolutions was discussed. Committees had been given a mandate to study national issues and it was agreed that committees should be in the forefront in the development of policy.
- The position paper "Adolescent Pregnancy" prepared by Catherine Wilson and Joanne Jennings was accepted in principle. A guide for the writing of position papers was also accepted.
- The Home Economist in Business Cookbook Committee reported that to June 30, 1980, 7,153 *Collage of Canadian Cooking* had been sold and that there are 2,928 books left. The Marketing Committee has put out tenders for a publishing house that would take over the book and publish, market and sell it on a wider scale.
- The mail ballot as instituted this year (responses were received from 40% of our membership) will continue next year. The mail ballot serves as an opportunity for all our members to have involvement in our association.
- The International Development Committee presented "Guidelines for Twinning" which were accepted in principle. The purpose of developing the guidelines was to provide information to CHEA affiliated groups who may wish to consider twinning with an association in a developing country. The guidelines attempt to provide a broad framework to strengthen the capacity of affiliated associations to formulate productive links with professional associations in developing countries.
- Future Conference sites are in Toronto, July 1981; Edmonton, July 1982; St. John, N.B. 1983; Ottawa, 1984; and Vancouver, 1985.

Abstracts of Current Literature

Submitted by
Department of Home Economics
University of Windsor

The development of perceptions and evaluations of social inequality among public school children.

B. Baldus and V. Tribe
1978
Canadian Review of Sociology and Anthropology, *15:50-60*

This study was designed by two University of Toronto sociologists to examine how 108 Canadian students employ concepts of social inequality to identify and order their environment. Observations were based on information of five sets of photos. Three schools in the Toronto area with widely differing characteristics were used. A sample of 36 children was chosen from each school; 12 each from Grade 1, Grade 3, and Grade 6, for a total of 108 cases. Each child was individually interviewed by tape and the interview was a game of matching pictures.

The photos consisted of two pictures of a man, one well dressed and the other in casual clothes; two pictures of a house, one in a high income area and the other in a working class district; two pictures of a living room, one in an expensive home and the other in a rented apartment; two cars, one a small old car and the other a luxury car; and two more pictures of individual men, one well-dressed and addressing a meeting and the other in older clothing and sitting on a porch.

The first and third graders used only factual terms to describe differences between the two men in the photos. By contrast, the sixth graders immediately mentioned inequality-related criteria and drew inferences to other aspects of the men's lives that were not visible in the pictures.

Baldus and Tribe say this shows that somewhere between the ages of eight and eleven most children have acquired predispositions that make them expect lower-class persons, as based on their dress, to be unsuccessful or morally disreputable, while they view the behavior of higher-class, better-dressed persons as exemplary and esteemed. These concepts legitimate inequality structures as a quasi-natural part of human life and describe high positions in these structures in positive and rewarding terms and low positions in terms that are aversive and disreputable.

The views of the respondents were not affected by the social position of the children's parents.

Linda M. McKay

1,528 little geniuses and how they grew

D. Goleman
1980
Psychology Today, *13(9), 28-43*

This article is a review of the preliminary findings of the Lewis B. Terman study of high I.Q. children launched in 1921. Terman, a Stanford University psychologist who developed the Stanford-Binet intelligence test, followed the lives of 857 boys and 671 girls with I.Q.'s over 135 for more than six decades. The most recent study of the group was completed in 1977 and although the data will not be ready for full analysis until 1982 some interesting conclusions have been drawn by Robert and Pauline Sears, current overseers of the project since Terman's death.

Terman was interested in exploring the myth that precocious children were doomed to misery or as the cliché puts it, "early ripe, early rot". According to Sears this myth has no basis in fact. The preliminary results from the Terman study indicate that exceptional intelligence does not preclude ordinary happiness or worldly success but neither does it guarantee extraordinary accomplishment. Although the great majority of men and women in the study have done well in their careers, there were no geniuses and the group as a whole ranked low on artistic creation.

Some of Terman's subjects also did markedly better than others and this difference in success, according to Sears, appears to be related to a special drive to succeed or a need to achieve that existed in some subjects from grammar school onward. Family background as well appears to be related to the success of high I.Q. children but its exact relationship still needs to be explored.

According to Goleman, the Terman study is "the granddaddy of all life-span research", and although we will have to wait until 1982 before the full analysis is done, this preliminary report raises some important questions and offers some interesting implications for all areas of educational research.

Nancy Hall

Preschool vegetarian children: Dietary and anthrometric data.

J.R. Fulton, C.W. Hutton and K.R. Stitt
1980
Journal of the American Dietetic Association, *76:360*

Adequate nutrition during infancy and childhood is essential for normal growth and development. It is believed that the volume of food required to supply energy and nutrient needs is greater in vegetarians than in non-vegetarians. Vegetarian children aged two to five years may be vulnerable in that they may not consume sufficient quantity of food to meet nutrient and energy requirements to assure normal growth and development.

This study was designed to assess the average daily intakes of food energy and selected vitamins, minerals and amino acids of children aged two to five years on a pure vegetarian diet. Forty-eight children were randomly chosen from a 800 member pure vegetarian commune called "The Farm" in Tennessee. The Farm is self-sufficient in food, purchasing only margarine, sugar, infant cereal, and yeast which is used as a source of vitamin B_{12}. Also evaluated were selected anthropometric measurements.

Based on three-day food records kept by the mothers, mean intakes of food energy, protein, vitamin A, thiamin, riboflavin, niacin, ascorbic acid and vitamin B_{12} exceeded the Recommended Dietary Allowances (RDAs) except in the case of four-year-old girls who consumed slightly less than the RDA for energy.

The nutrient of most concern was calcium with mean intakes of less than half the RDA. No dairy foods were consumed; all calcium was obtained from vegetable sources. The authors felt that in view of low calcium intake in conjunction with a high-phytate diet further study is warranted.

Iron intake exceeded the RDA for all children except the two and three-year-old girls who consumed 93% of the allowance. Iron cookware was used frequently in food preparation; however, the iron intake from this source is unknown.

Anthropometric measurements showed mean height and weight values below the HANES findings for children ages three to five years. Height and weight for two-year-olds met or exceeded HANES values. Skinfold measurements were below HANES for all ages.

Marian Twiss Ho

California's children of divorce

J.S. Wallerstein
and J.B. Kelly
1980
***Psychology Today**, 13(8), 67-76*

Today, conventional wisdom holds that unhappily married couples should not stay together for the sake of the children, but should divorce for their own as well as for their children's future happiness. The authors of this article seriously call into question this bit of conventional wisdom. In 1971 Wallerstein and Kelly started the *Children of Divorce Project.* They interviewed 60 families with children that had recently gone through divorce and interviewed them both 18 months and five years later.

One conclusion made by the authors is that divorce produces at least three different patterns with many possible variations among both adults and children. Even five years after a divorce, at least half of the families studied were barely coping, one-quarter were described as resilient and one-quarter were described as bruised. The factors that make the difference in how children adjust to a divorce are the same factors that make for good adjustment in intact families: psychologically healthy parents and children who are involved with one another in appropriate ways. Unfortunately, these factors are almost invariably absent in the post divorce family. It is very difficult for divorced parents to maintain distinctly separate social and sexual roles while continuing to cooperate as parents. It is, however, not impossible.

Wallerstein and Kelly, although disheartened by the results of their study, are still convinced that divorce should remain an available option for adults in unhappy marriages. What is currently needed is more effort in easing the trauma of divorce for families and more support for single parent households. The problems of post divorce families are very real and perhaps unavoidable. With strong community effort, however, they can be minimized.

Nancy Hall

Metric Conversion (continued from page 239)

In consumer education, to what extent are metric units used when students are comparing costs?

		Canada	N.S.	N.B.	Ont.	Man.	Sask.	Alta.	B.C.	PEI Nfld. Que. NWT Yukon
68%	100%	4	1		2					1
	75-100%	105	11	1	19	2	5	10	55	2
	50-74%	164	16	6	29	6	7	7	91	3
	25-49%	65	6	1	10	8		5	32	3
	1-24%	41	3	1	9	5	3	1	14	5
	0%	21	1	2	2		1		14	1
	Total Replies	400	37	11	71	21	16	23	206	15

In housing, when measurements are used, to what extent do students use metric units?

		Canada	N.S.	N.B.	Ont.	Man.	Sask.	Alta.	B.C.	PEI Nfld. Que. NWT Yukon
40%	100%	1								1
	75-100%	40	5	3	2	1		7	20	2
	50-74%	44	9	2	10	1	1	2	16	3
	25-49%	36	4	2	6	2	2	6	10	4
	1-24%	52			17	4	6	6	16	3
	0%	39	4	5	8	1	2	1	16	2
	Total Replies	212	22	12	43	9	11	22	78	15

but can you type? Canadian Universities and the Status of Women. *By Jill McCalla Vickers and June Adam.* Toronto: Clarke, Irwin, 1977. 142 p., $5.95.

Do Canadian women have equal status with Canadian men in all spheres of higher education and in the professions for which higher education is a basic preparation? Does the belief in the inferior intellectual capacity of women remain as a strong force in our society? These questions constitute the rationale behind this book and the research that went into its writing.

The authors have examined women and their place in the academic system from various angles. Society as a whole is a large factor in our educational system and, as the authors concede, "the universities cannot educate women who do not apply for entrance". Subsequent chapters study women as undergraduates, as graduate students in various professions, and finally, women in the academic profession itself. In the final chapter, the authors present comprehensive conclusions and some proposals for affirmative action. Societal pressures and sexual stereotyping provide problems which must be attacked from both outside and within the universities in Canada. However, it is the feeling of this reviewer, that some of the proposals for affirmative action set forth by the authors would run the risk of reverse discrimination. As a home economist, I must also take offence to some of the inferences made toward the home economics profession.

The facts presented throughout the text are well supported through the extensive use of tables and charts. Unfortunately, the statistics used are now somewhat dated (1963 — 70), and one must question their relevance to today's situation. Also, as the authors themselves point out, there is considerable risk in any statistical interpretation when the auxiliary factors are not thoroughly researched.

Persons interested in the status of women in Canada or in the educational system in general will find this book interesting and informative. Even given the limited usefulness of the statistics, the trends outlined will provide a basis for further research and challenge.

Reviewed by:
Linda A. Lusby
Home Economics Department
Mount Saint Vincent University
Halifax, Nova Scotia

Finding My Way. *By Audrey Palm Ricker and Charles Ricker.* Peoria, Illinois: Chas. A. Bennett, 1979. 269 p., $7.52.

As stated in the preface, the theme of this book is *preventive education.* One of the authors is an R.N., which perhaps explains the *medical model* approach. Educators may deny there is such a thing as *preventive education* analogous to *preventive medicine.* Students learn math to enable them to manage their affairs — from allowances to mortgages. In the same way, Family Life Education is designed to enable students to make better decisions affecting their personal relationships. It is not designed specifically to prevent teenage pregnancy or venereal disease. The authors would claim better decision-making is also one of their goals. However, we read on page 23: "Information about sex is like taking a shot to prevent the flu."

The authors interviewed parents, teachers, and adolescents prior to writing this book, and adolescents advised the authors "to avoid using a lot of 'shoulds' and 'don'ts". The authors try to follow this advice while encouraging their audiences to develop a strong set of personal values.

The information relating to anatomy, physiology, and the reproductive systems is accurate as is the information about pregnancy and contraception. However the information about abortion pertains to the U.S., and a teacher using this book as a text would need to be armed with accurate information pertaining to abortion in his/her part of Canada.

There is an extensive and sensitive discussion of homosexuality as well as definitions of a variety of terms such as fetishism, hermaphrodite, transsexual and other terms about which teenagers frequently ask.

An overview of this book may invite its use as a text, but if a teacher chooses to introduce the book to his/her students, the teacher should read the book thoroughly to become aware of some very biased value-judgements. For example: "Teens who live in single-parent homes have more opportunities to be sexually active" (p. 20).

The book is not recommended for any specific age group by the authors although the range might include grades six through nine. If the intended reader is not "turned-off" by some of the value-judgements and illustrations the students could discover a good deal of accurate information pertaining to human sexuality.

Reviewed by:
Barbara MacDougall
Specialist,
Family Life and Sex Education
Calgary Board of Education

Editor's note: A *Finding My Way Teacher's Guide* is also available.

How to Cut Heating and Cooling Costs. *By Peter Jones.* New York: Butterick Publishing, 1979. p. 144; Paperback $5.95.

Energy saving tips and "how-to" instructions for the home owner interested in energy conservation make this book a handy reference for anyone teaching housing or equipment.

The author goes into more detail, on a wider variety of topics than is found in many references on energy conservation. The topics dealt with include: how to put in your own insulation (and when not to try); caulking and weather-stripping windows and doors; and how to choose and/or modify and maintain heating systems, cooling systems and all of the major appliances.

The chapter on solar energy contains several interesting ideas on modifications that could be made to many older homes to reduce the amount of heating and cooling required and provide some active solar heating.

Many of the suggestions could be implemented with a minimum investment in time or money. Of particular note here is the information on lighting.

It must be remembered that this book was written for the U.S. market and some of the suggestions may not be valid in Canada.

It's an easy to read book, contains easy to understand instructions, and the large number of sketches not only make it easy to follow for the do-it-yourselfer but provide a source of illustrations for the teacher.

Reviewed by:
Carol Taylor
Professor
Ryerson Polytechnical Institute

You Eat What You Are. *By Thelma Barer-Stein.* Toronto: McClelland & Stewart, 1979. 624 p., $19.95.

You Eat What You Are is a fascinating reference book particularly designed to help educators of food and nutrition, or scholars interested in a study of cultural traditions of foods, gain an understanding of the food habits of the many different ethnocultural groups in Canada. Author Thelma Barer-Stein, examines over 100 different cultural groups. She explores the countries of origin by examining the historical and sociological make-up of family life, foods that are commonly used, meal patterns, cooking methods and customary foods prepared for celebrating special occasions. The book contains no recipes. It is designed to shed light on why certain food habits exist. Thelma Barer-Stein best sums it up when she writes, "It is possible that we really are what we eat — physiologically — but because each of us is part of an ethnocultural heritage, it is even more probable that we eat what we are." The book clearly points out that people everywhere carefully select, prepare and eat their foods in accordance with established tradition.

I would think that the book would be valuable to professionals in the fields of education, food and nutrition, social work, public health, medicine, commercial food services or any profession or service that involves dealing with people.

The subject areas are well researched, documented and presented in a very interesting, readable fashion.

Reviewed by:
Edith R. Zawadiuk
Regional Home Economist
Alberta Agriculture
Two Hills, Alberta

Welcome to the Real World: A Guide to Making Your First Personal, Financial, and Career Decisions. *By Annie Moldafsky.* Garden City, New York: Doubleday, 1979. 179 p., Paperback $6.25.

This short book attempts to be a . . . *Guide to making Your First Personal, Financial, and Career Decisions.* It fails, perceptibly, since the subject matter is much too broad to be treated in only 169 pages. The book is divided into three sections: *Declaration of Independence, Getting in Gear,* and *Making the World Work for You.* Of the three, the second section is of the most value, particularly the sections on apartment hunting and a short section on the theory of money handling. The practical hints can be directly applied to real situations. The first and third sections, consisting of generalizations aimed at self-improvement and self-actualization, are much too abbreviated and can be found in greater depth in other works.

The book is intended for the student finishing school and going on to *independent living.* However, some of the words are too advanced for this group. The values expressed throughout are American upper middle class, and the whole tone of the book is toward the motivated, intelligent student who is heading toward a professional or business career. I feel, however, that it is the unmotivated student, with little sense of direction and fewer social skills, who would require a manual of this type. Hence, the style, the content, and the expected audience do not jibe.

This book could be used as resource material by the teacher of a life skills course, or could be read for interest by the average or above-average student. For the Canadian reader it must be noted that much information pertains only to the United States, including financial information, and the financial information is out of date, even though this book was published in 1979. Thus, its use as a tool in the classroom would be restricted, not only by the above-mentioned, but also by its value-orientation, generalizations, and above all, one fatal flaw — it's boring.

Reviewed by:
Helen Friedman
Edmonton, Alberta

Fashion: Consumer Behavior Toward Dress. *by George B. Sproles.* Minneapolis, Minnesota: Burgess Publishing Company, 1979. p. 236; Paperback $12.95.

This book offers a unique and comprehensive analysis of the consumer decision making process specifically related to fashion adoption. The first half of the book establishes the conceptual framework of "fashionable behavior" with lengthy discussions of lifestyle concepts, societal influences, fashion marketing and pure and modified economic theory. The second half focuses on a detailed analysis of consumer behavior culminating in the presentation of a general model of the consumer's fashion adoption process.

Although very readable and thorough, the text is somewhat redundant. However, the inter-relatedness of the variables discussed necessitates detailed, overlapping discussions. The diagrams and tables contribute well to the carefully explained concepts. Since it is written from a U.S. perspective, consumer expenditure data is not directly applicable. The same is true of analyses of lifestyle and economic trends, but a generalized theory of how these trends influence the fashion adoption process is appropriate for Canadian use.

The author has succeeded in presenting a variety of interpretations for most of the concepts. This approach is of value as it reinforces the highly subjective nature of the variables, stimulates individual thought and is useful in initiating group discussion.

This book is intended and is appropriate for a university-level course in clothing and human behavior, consumer behavior, and consumer economics and as a primary text for a fashion marketing course. ●

Reviewed by:
Janice Shivers
Brescia College — The University of Western Ontario, London, Ontario.

New Publications and Visuals

Canadian Vegetable Kit

The *Canadian Vegetable Kit,* in English or French, is now available free of charge to school teachers across Canada.

Although Popeye loved spinach, Bugs Bunny craved carrots and Jack specialized in beanstalks, Canadian children still need encouragement to eat a selection of different vegetables daily. This variety is often lacking in the diet of school-age children. Eating an assortment of vegetables daily provides the diet with needed vitamins, minerals and fibre.

The *Canadian Vegetable Kit,* produced by Food Advisory Division at Agriculture Canada, is designed to increase the vegetable consumption of school-age children by improving the familiarity and acceptability of Canadian vegetables.

The kit contains various learning activities specific to three age groups — 6 to 8, 8 to 12 years and 12 to 16 years. Also included is a colorful 24″ x 35″ poster featuring about 20 vegetables in greatest production in Canada. Handout material for each age group is designed for easy duplication.

This resource package will be of special interest to elementary school teachers, as well as teachers in geography, science, health, ecology and home economics.

To obtain a copy of the *Canadian Vegetable Kit* write: Information Services, Agriculture Canada, Sir John Carling Building, Ottawa, Ontario K1A 0C7.

Weight Control

Weight Control: A Guide For Teenagers accents the importance of developing a positive self image.

This guide can be used to help teenagers assess their problem areas, and control them. It gives practical answers to the special problems of eating away from home, and eating out on special occasions. Worksheets are also available to enable teenagers to record their eating activities, and to chart their progress in weight control. This booklet is aimed primarily at teachers but would be good for teens themselves.

Copies are $2.50 each. Orders of 10 or more are $2.25 each. *Weight Control* worksheets are also available at $ .90 per package, or $ .80 per package for 10 or more. There is a $1.00 handling charge for orders of $15.00 or less. Order from: The Guidance Centre, University of Toronto, 1000 Yonge Street, Toronto, Ontario M4W 2K8.

Project Nutrition

This Nutrition Education unit is a recent project from the Kellogg Company in the United States. It is designed to offer nutrition educators activity ideas and nutrition information for use with adolescents.

The format is exciting and the content is quite detailed. The unit consists of educational activities to help students learn by participating. Instead of absorbing information passively, students are given the opportunity to survey, assess, analyze, coordinate and adapt information to complete a variety of activities.

Content Overview:

Section I	Nutrition is essential for normal growth and development.
Section II	Nutrients are basic units of life.
Section III	Good nutrition is each individual's responsibility.

Since this is a U.S. publication, it reflects U.S. dietary goals. This should be kept in mind when using the activities.

Copies of *Kellogg's Project Nutrition* unit which cost $4.00 per set may be obtained by sending a cheque or money order only from Kellogg's Project Nutrition Unit, 6700 - Finch Avenue, West, Rexdale, Ontario M9W 5P2.

Nutrition in the Park

This is a nutrition education manual for leaders. It contains activities for nutrition education. It is available from Nutrition in the Park, c/o T.A. Sutcliffe, Administrative Assistant, Program Department, London Board of Education, P.O. Box 5873, London, Ontario N6A 4T5.

Allergy-Free Rice Recipes

Anyone who is allergic to milk, eggs, wheat, and/or gluten, can more than likely eat rice, which is classified as non-allergenic food. The Rice Council has prepared a leaflet of "Tasty Rice Recipes — for Those With Allergies" which contains 29 recipes for breakfast, lunch, dinner and snacks. They also offer a leaflet of 12 rice and seafood recipes, reasonable in calories and low in cholesterol. To obtain free copies of these leaflets, send a stamped, self-addressed business-size envelope to: Rice Council, P.O. Box 22802, Houston, Texas 77027.

Growing Up Whole

Growing Up Whole is a new publication containing articles reprinted from professional journals. Items are gathered to provide information as it applies to the family. Some titles included in the 1979-80 issues are "Evidences of Single-Father Competence in Childrearing" from the *Family Law Quarterly,* "Preventing Unwanted Adolescent Pregnancy" from the *American Journal of Orthopsychiatry,* "Breast-Feeding: What is Left Besides the Poetry" by the Nutrition Committee of the Canadian Paediatric Society, and "Middle Income, Divorced Female Heads of Families: Their Lifestyles, Health and Stress Levels" from the *Canadian Journal of Psychiatry.* The journal is from Camar Publications, Box 125, Station "G", Calgary, Alberta T3A 2G1. Published ten times yearly. Cost: $30.00.

ConCerns

The Consumer Education Resource Network, CERNS, is a project funded by the Office of Consumers' Education, Department of Health Education, Department of Health, Education and Welfare. It is designed to become a national resource and service network for the consumer education field. A newsletter *ConCERNS* is published 11 times a year to facilitate the exchange of information. For information on CERNS, and on obtaining this free newsletter ($25 for business groups), write to: CERN, 1555 Wilson Boulevard, Suite 600, Rosslyn, Virginia 22209.

On Your Own — Managing Your Money

These two films, *On Your Own* and *Managing Your Money* are very good resources for teaching management to high school students. *On Your Own* outlines problems faced by two young boys as they together rent their first apartment. *Managing Your Money* relates the problems of a young girl allocating her first paycheque. A humorous and somewhat unorthodox approach is used in these films but they certainly hold one's attention. U.S. in origin, mention is made of some legislation not applicable to Canadians, but generally these films would make an impact on the teenager about to leave home for the first time. Purchase and preview information may be obtained from: Gordon Watt Films, Inc., 4049 Sheppard Avenue, East, Agincourt, Ontario M1S 1S8.

Helping Children Help Themselves

What parent wouldn't like to have self sufficient children? Alberta Agriculture's home economics branch has published an activity-oriented 120-page booklet, entitled *Helping Children Help Themselves* to help children to become more independent by acquiring daily living skills.

The publication addresses parents and group leaders but the activities are geared to children. Delightful drawings and illustrations are liberally scattered throughout the text. The reader is introduced to Cory Capable and Cathy Confident, the two young people who star in each of the five units.

The first unit, "Children In The Marketplace", teaches children the meaning of money and how to manage it. A child is destined to make purchases all his life, so the earlier he learns the basics of consumerism, the better off he will be.

In the unit on "Clothes For Kids", children are encouraged to select and care for their own wardrobes. The basics of taking pride in one's appearance are also given.

Another unit in the book deals with good communication. It is designed to teach children how to speak and listen so that they understand one another. Still another unit deals with safety in the home. It invites children to be on the lookout for things that are unsafe in their house. The final unit, "Kids In The Kitchen," offers several simple, well-illustrated recipes that children can make themselves.

A common feature in all five units is a listing of resource materials that group leaders and parents may find useful in dealing with children.

Single copies of *Helping Children Help Themselves* are available from Print Media Branch, Alberta Agriculture, 9718 - 107 Street, Edmonton, Alberta T5K 2C8.

Stress

Stress is an aspect of family life that is a growing concern to those who work with families, and as such is an area important to the home economist.

The following pamphlets are available from Public Affairs Pamphlets, 381 Park Avenue, South, New York, New York 10016. Bulk rates are available.

Helping Children Face Crises. Pamphlet #54. Alicerose Barman. 1956. 50¢.

After introductory comments on small and major crises and the role of parents at times of crises, the author discusses children's capacities for adjustment. The pamphlet has major sections on sharing truth with children about family problems, death in the family, separation and divorce, and other crises. There's a one-page summary of "Do's and Don'ts for Handling Children's Crises."

How To Cope With Crises. Pamphlet #464. Theodore Irwin. 1971. 50¢.

In this pamphlet, Irwin discusses the meanings of crises and patterns of behavioral response. He discusses special approaches and adjustments to various types of adversity, such as serious illness or accident, job loss, divorce, being jilted, death, and news of fatal illness.

One section covers psychological emergencies of children. His theme is how to cope and conquer, including positive steps an individual can take, how others can help, and positive outcomes of upsetting experiences.

Tensions and How To Master Them. Pamphlet #305. George Stevenson and Harry Milt. 1959. 50¢.

This pamphlet is a condensation of the book *Master Your Tensions* and *Enjoy Living Again* by Stevenson and Milt.

Understanding Stress. Pamphlet #538. Arthur Freese. 1976. 50¢.

This pamphlet discusses the history of stress, the meaning of stress, fight-or-flight responses, the anatomy of stress, nonspecific responses, the biological stress syndrome, stress and disease, and protecting oneself. Simple, expressive illustrations enhance the pamphlet.

Stress Management — An Annotated Bibliography

A publication developed in a summer student project funded by the Summer Resources Fund, Health Promotion Directorate, Health and Welfare Canada. Annotations and lists of references were categorized in five areas: general articles on stress, coping and adaptation to stress, occupations and stress, life events and stress, and family and stress. The publication has been sent to deans, directors and chairpersons of home economics, nursing and related programs of study across Canada and to others with an expressed interest in management and the family. Copies are available upon request until the supply is exhausted from Dr. Nancy C. Hook, 1144 Grosvenor Avenue, Winnipeg, Manitoba R3M 0N8.

After general discussion on the dangers of today's living habits, specific sections cover anxiety, guilt, and overprotection. The authors suggest action to overcome and control your tensions.

A set of questions for self-analysis and determination of whether your tensions are slight or severe is included. If tensions are judged to be severe, professional help is recommended; but if slight, recommendations are made that the authors suggest will lead to relief. These recommendations include talking it out, escape, recreation, time management, ridding oneself of anger, and handling feelings of neglect.

Coping With Stress

This slide-cassette presentation covers the symptoms and causes of stress, Type A personality (prone to stress-related diseases), monitoring our stress level, maintaining ourselves in the face of stress, maneuvering to reduce stress, relaxation and meditation, and discovering our own stress level. The objective of the presentation is to help adults recognize the causes and learn to combat the effects of stress.

The set consists of 71 2x2 color slides, an 8 page script, and a cassette tape with inaudible tones.

The complete set (slides, script and tape) can be purchased for $32.54, U.S. funds. Checks or purchase orders should be made payable to the Regents of the University of California and sent to: Visual Media, University of California, Davis, California 95616.

Connections

Connections is a national newspaper illustrating Canada's role in international development. Published at two month intervals, the newspaper provides an overview of development institutions and activities within Canada, and significant Third World concerns.

Coverage encompasses all the various sectors of development related activity (volunteer, professional, educational, research, official). The newspaper also provides a popular forum for the exchange of views on aid policy and other development questions. Cost: $12.00; from *Connections*, Ryerson Third World Centre, Room M210, 50 Gould Street, Toronto, Ontario M5B 1E8.

Nouveau Matériel Didactique Pour Les Enseignants

Les enseignants du Canada peuvent maintenant se procurer gratuitement la *Pochette sur les légumes canadiens* publiée dans les deux langues officielles.

Même si des personnages comme Popeye et ses fameux épinards ou Bugs Bunny avec son éternelle carotte pourraient inciter les enfants à manger des légumes, il reste que nos petits Canadiens ont besoin d'autres sources d'encouragement pour accepter de manger quotidiennement une variété de légumes.

Les légumes jouent un rôle important dans l'alimentation parce qu'ils fournissent des vitamines, des minéraux et des fibres. Malheureusement, le choix offert aux enfants d'âge scolaire est souvent limité.

La *Pochette sur les légumes canadiens* préparée par la Division de la consultation en alimentation d'Agriculture Canada vise à accroître chez les enfants la consommation de légumes en leur faisant connaître et accepter toutes ces denrées canadiennes.

Elle propose plusieurs activités d'apprentissage particulières aux trois groupes d'âge allant de 6 à 8 ans, de 8 à 12 ans et de 12 à 16 ans et comprend une affiche couleur de 24 sur 35 po présentant environ 20 légumes canadiens. Il est à noter que les documents à distribuer à chaque groupe de travail sont conçus de façon à faciliter la reproduction.

Ce matériel didactique sera sûrement d'une grande utilité aux instituteurs de l'école primaire ainsi qu'à ceux qui enseignent la géographie, les sciences, l'hygiène, l'écologie et les sciences de l'alimentation.

Pour en obtenir un exemplaire, veuillez écrire aux: Services de l'information, Agriculture Canada, Immeuble Sir John Carling, Ottawa, Ontario K1A 0C7.

Energy Idea Book

The Consumer Economics and Management Committee of CHEA completed a project in 1979-80 on the use of energy in the home. Understanding that there was much new literature and research on domestic energy with which the average CHEA member might not be familiar, also many exciting projects relating to energy conservation being in place all across the country, the committee felt that more information should be shared and so assimilated an idea book on the use of energy in the home. The result is a compendium of resources: bibliographies, books, periodicals, audiovisuals and special projects covering all aspects of domestic energy consumption. This compendium was enthusiastically received by delegates at the 1980 conference. **Additional copies are available** from CHEA office at the price of $3.00 pre-paid (including the postage and handling) for CHEA members and $4.00 for non-members. The price includes a 1981 energy update to be distributed at this time next year.

Our Petroleum Challenge: The New Era

With energy becoming an increasingly important resource for families to manage, it is important for home economists to have an understanding of energy sources.

A comprehensive booklet focusing on the life story of the Canadian petroleum industry has been published as a major resource in a nationwide information program launched by the Petroleum Resources Communication Foundation. Entitled "Our Petroleum Challenge: the New Era", the 64 page publication has been carefully researched to offer a reference for libraries, media, governments and others interested in the petroleum industry.

The history of oil in Canada, the process of searching for oil and gas and the products they become, the events that influence the petroleum industry, and the future challenges it faces are but a few topics covered.

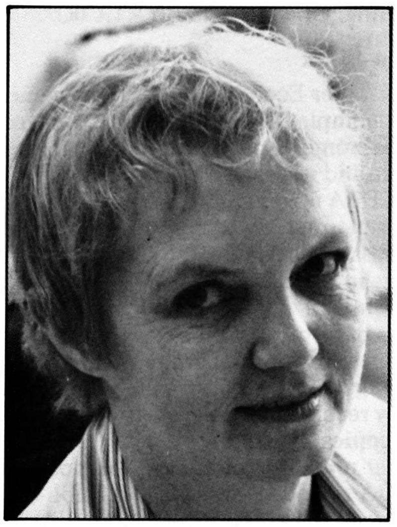
Copies of the booklet are available in French and English for $3.00 from: P R C F; P.O. Box 6746, Station D, CALGARY, Alberta T2P 2E6.

Best Recipes

The Canada Starch Company has been publishing recipes for over 100 years. Their new publication *Our Best Recipes Since 1858* consolidates these recipes into one attractively prepared booklet. It's available for $1.00 from: Consumer Service Department, Best Foods Division, The Canada Starch Company Ltd., Box 129, Station "A" MONTREAL, Quebec H3C 1C5.

Correction: Energy Conservation Guides

Environment Views Teachers Guides, as mentioned in the Summer 1980 issue *CHE Journal*, are **not** available to teachers outside of Alberta. Apologies for any inconvenience this error has caused.



Farewell to Nola Wade

Nola Wade, who was the first Executive Director of the Canadian Home Economics Association, left our employ on May 31st. Nola spent five years with the association and worked with Executive Committees based in Ottawa, Edmonton and Winnipeg. During this time, Nola travelled widely across Canada as the representative of CHEA. She visited numerous affiliated associations and became well-known to many Canadian home economists. Nola probably recalls these trips among the highlights of her time at the National Office. Especially the annual conferences which took place in Montreal, Toronto, Winnipeg, Calgary and St. John's. For sheer drama, excitement, confusion, and volume of activity, the International Congress of Home Economics in Ottawa in the summer of 1976 undoubtedly heads the list.

While in the National Office, Nola was responsible for the *CHEA Newsletter*. This has developed from a single page of news items to a very useful communication link with the members and the National Office. With Jean Bradshaw as the other member of the team, she provided information and assistance to members upon request. New initiatives of the Board during that time include the projects of the International Development Committee funded by CIDA, the setting up of the CHEA Foundation, the use of a mailed ballot for election of Board members, all of which required the assistance of the Executive Director.

Since Nola is a home economist and CHEA member, we confidently hope that our paths will cross in future years. Nola's many friends wish her well in all her future endeavors.

Diana Smith — New Executive Director

The Canadian Home Economics Association welcomes Diana Smith as its new Executive Director.

In her new role, Diana Smith will carry out the policy of the board of directors, administer the national office and act as liaison with Association members, affiliated groups, the general public and the media.

Well qualified to represent home economists throughout Canada, Diana has lived and worked in four provinces.

She graduated from the University of Alberta with a B.Sc. (H.Ec.) and has been active in the areas of teaching and extension in New Brunswick and Nova Scotia.

She has taught Family Studies, developed and taught a program in life skills for the educably-retarded, and worked with adults in developing leadership skills and personal growth. As well, she organized and operated a co-operative playgroup and nursery school and worked as a consumer broadcaster and writer.

Her previous executive experience includes stints as president of the Halifax-Dartmouth Home Economics Association; vice-president and president-elect of the London Home Economics Association and as a member of the ad hoc committee, Ontario Home Economics Association.

Diana is concerned with the interrelationship of the home economics profession and changing family roles and patterns. She supports expanded and equal opportunities for women in all areas of economic, social and political life and feels society has a responsibility to provide adequate child care.

Her wide range of experience and interests will stand Diana Smith in good stead in her new position as Executive Director of the Canadian Home Economics Association.

Home economists attending the Conference in Saskatoon had the pleasure of meeting Diana. We look forward to working with Diana and wish her every success in this challenging position.

The annual conference of the **Canadian Association for Young Children** will be held November 6-9 in Calgary, Alberta. The focus is for a multidisciplinary thrust towards coordination and delivery of services to children and their families. Conference brochures are available from CAYC Conference Committee, P.O. Box 10, Station "G", Calgary, Alberta T3A 2G1.

A **working paper on day care** is being distributed to all Alberta Home Economics Association Locals to be used as a vehicle for discussion and to create awareness of the key issues surrounding day care.

The **Manitoba Home Economics Association** plans to initiate a one year buddy system between MHEA members and new graduates.

The fund raising committee of the **PEI Home Economics Association** were most successful with their five one night "Ideashops" sessions last year.

The **American Association for the Advancement of Science's** 147th National Meeting and Exhibit will be held in Toronto, January 3-8, 1981.

Marie-Josee Drouin, Executive Director of the Hudson Institute of Canada, one of Canada's futurists, and author of *Canada Has A Future* was the keynote speaker at the **Canadian Institute of Food Science and Technology** annual convention.

Kathryn Dale Wood of **Craik, Saskatchewan** won the Rutter Prize as the top 1980 graduate in the College of Home Economics, University of Saskatchewan.

On June 30, 1980 after 25 years with the University of Alberta, **Dr. Ruth Renner** retired as Professor and Chairman of the Foods and Nutrition Division, Faculty of Home Economics. As Division Chairman, teacher and researcher, Dr. Renner did much to extend, interpret and communicate the science of nutrition.

In the summer of 1979, **Brescia College,** The University of Western Ontario, sponsored a successful **Nutrition in the Park,** an awareness program for children. It was supported by a Young Canada Works grant of $16,000. A copy of the completed grant application is on file in the CHEA National Office (See "New Publications", page 251, for more detail).

Four year Honors Home Economics Programs have been approved by The University of Western Ontario Senate for implementation in September, 1980. These programs will be offered jointly by **Brescia College** and **The University of Western Ontario.** Restructured Three Year Home Economics Programs have also been approved.

The Helen M. McKercher Scholarship is a $1,000 Scholarship established by the Federated Women's Institutes of Ontario in recognition of Helen McKercher's outstanding contribution to Extension Education. To be eligible one must be a Canadian Citizen, Ontario resident for at least five years, and a:

- home economics graduate of a recognized Canadian University pursuing graduate studies in any area of home economics; **OR** a
- diploma course graduate of home economics education who plans to advance to degree level. Applications may be obtained from the Federated Women's Institute, Eighth Floor, 801 Bay Street, Toronto, Ontario M5S 1Y9.

During the past year **NSHEA Education Committee** members **Heather MacLean, Gail Huntley** and **Connie Jenkins** began a survey by contacting all first year teachers to get their opinions on the expectations they held before entering the profession as compared to the reality of the position in which they work. Results of this survey will be available in early fall.

Ellen J. Foster, Aylesford, N.S., is the **first** recipient of the **NSHEA Scholarship.** A Scholarship Committee was formed in 1979 as a sub-committee of the Education Committee. NSHEA now awards a $600 scholarship annually to a high school graduate who intends to pursue the study of home economics at university, preferably in Nova Scotia. Thirty-two applications were received for this year's scholarship.

The **Association of Professors of Clothing and Textiles** will meet in Washington, October 29 - November 1, 1980. For further information about the national meeting, the association, or copies of the 1977 and 1978 proceedings, contact Loy Walton, Executive Secretary, 6102 Covered Bridge Road, Burke, VA 22015.

The **Canadian Research Institute for the Advancement of Women** will holds its fourth annual conference in Toronto, November 14-16, on the theme "Women and Power during the Eighties". Sub-themes are "Women and Power: Effects of Powerlessness", "Women and Power: Economics", "Women and Power: Politics". Information may be obtained from Dr. Norma Bowen, 1980 Conference Coordinator, Department of Psychology, University of Guelph, Guelph, Ontario N1G 2W1.

Sheila Brown, formerly on the staff of the University of Alberta in Administrative Studies, is the new **department head** in Clothing and Textiles at the Faculty of Home Economics, **University of Manitoba.** Many will remember her presentation at the CHEA Conference in Calgary in 1978.

Lila Goodspeed, a home economics educational consultant for Manitoba, will be in **Copenhagen,** Denmark from July 14 to 30, 1980. Lila is representing the Federation of Junior Leagues of Canada as a delegate to the Non-Governmental Organizations Forum, running concurrently with the U.N. Mid-Decade Conference for Women: Equality, Development and Peace.

The **1981 CHEA Conference,** "Integration", will take place in **Toronto, July 6-9.** Future CHEA conferences will be held in Edmonton, 1982; New Brunswick, 1983; Ottawa, 1984; and Vancouver, 1985.

The College of Home Economics, **University of Saskatchewan,** is introducing a new program in family and consumer studies and consolidating its present offerings into two divisions. A Family and Consumer Studies Division will include the new program in this field as well as the present options in clothing and textiles, and housing and design. A Foods and Nutrition Division will be a reorganization of the present dietetics and nutrition, and food science options. The changes will be phased in over the next four years, beginning this fall.

The United Nations General Assembly has proclaimed **1981** as the **International Year of Disabled Persons.** The official logo adopted by the United Nations to be used in connection with the International Year of Disabled Persons (IYDP) represents two people holding hands in solidarity and support of each other in a position of equality. Camera-ready copies of the logo and permission for use may be obtained from: P.O. Box 1981, Station "C", Ottawa, Ontario K1Y 2N9.

Marion Vaisey-Genser, Head, Department of Foods and Nutrition at the University of Manitoba is president-elect of the **Canadian Institute of Food Science and Technology.**

The annual conference of the **Family Studies/Home Economics Association** is scheduled for October 3-4, 1980 in the Hotel Toronto. The **"Passages and Perspectives"** is designed to let participants consider some of the stages of the adult. Workshops on professional development "methodology" topics are also planned. For further information call Ruth Marshall (416) 698-3327.

Betty Mullen, chairman of the *Canadian Home Economics Journal* committee and co-editor of *CHEJ* has been elected president of Edmonton YWCA. The Y is presently involved in a $900,000 fund-raising campaign for a Centre for Outdoor Recreation and Education.

Anne Kernaleguen, University of Alberta, is president-elect for the national ACPTC (Association of College Professors of Textiles and Clothing).

***Apologies to Nova Scotia** for the error which appeared re the separate twinning projects being undertaken by the NSHEA and by Mount Saint Vincent University. For clarification of these two projects, see the items which follow.*

NSHEA International Development Committee

During 1979-80 NSHEA established an International Development Committee, as a sub-committee to the Education Committee. This International Development Committee is affiliated with the CHEA International Development Committee and works through the CHEA Committee.

Twinning is a concept whereby an organization helps people in the Third World. This help may be in the form of advice, books, teaching materials, etc., depending upon the group needing the aid.

NSHEA decided at the February Executive Meeting to twin with the Home Economics Association of Malawi. Dr. Jean Steckle, Chairperson CHEA International Development Committee, was immediately informed of our decision. At present we are awaiting word from Mrs. Bani, President Malawi Home Economics Association (by way of Dr. Steckle) as to the type of help desired by their organization.

The Home Economics Associations of Newfoundland, Prince Edward Island and New Brunswick were contacted to see if they were interested in joining NSHEA for the Malawi Project. New Brunswick replied immediately, indicating they wanted to be kept informed when we receive definite information. There has been contact by phone with Prince Edward Island; they too want more information.

The members of the NSHEA should understand that the twinning project with the Home Economics Association of Malawi is not connected with the twinning project the Home Economics Department of Mount Saint Vincent University has with the Home Economics Department of the University of Malawi. These are two separate twinning projects.

Alice MacKinnon,
Chairperson
NSHEA International
Development Committee

NSHEA (Nova Scotia) is **to twin** with the Home Economics Association of Malawi. The type of help is to be decided pending further discussions with Mrs. Bani, President of the **Malawi** Home Economics Association.

QUEBEC HOME ECONOMICS ASSOCIATION

ASSOCIATION DES CONSEILLERES EN ECONOMIE FAMILIALE DU QUEBEC

The Montreal Home Economics Association amalgamated with the Quebec Association of Home Economics Educators to form the Quebec Home Economics Association. Last year's membership was 96. The **first recipient of QHEA's bursary** for the second year student with highest standing in Consumer Education is **Chantal Laverdière,** University of Laval.

Our thanks to all those provincial directors who fill out the information sheet for each issue of *Happenings*. This is one of the best ways provinces can be assured of representation in this column. We rely on information sheets, newsletters, and personal contacts for information for this column.

IFHE Council Report

(Continued from page 235)

will the International Federation for Home Economics carry out? What name will we have? These are all questions that will challenge the newly elected officers and executive committee members. To President Margaret Fitch of the United States of America we give best wishes for prosperity in her term as she works with Vice-presidents: Linda Stepenoff Reasbeck of Canada for the Americas; Dr. Emily Carpenter of New Zealand for the South Pacific; Dr. Maria Thiele-Wittig of Germany for Europe; Dr. Aurora Corpuz of the Philippines for Asia and Pamela Greene of Sierra Leone for Africa. To Mme. Carmelle Therein-Viau of Canada we wish ease in the financial situation in her new four year term as treasurer. The Executive Committee now includes: Denise Ricard from France, Dr. E. Nassr from Egypt, Patricia Thunder from Ireland, Unni Kulberg from Norway, and Nancy Granovsky from the U.S.A. To all we offer congratulations. ●

Standards Board

The name of the Canadian Government Specifications Board has been changed to the Canadian General Standards Board. Since the board has representatives from the provinces, municipalities, industry and consumers, in addition to the federal government, the new name better portrays this broad representation.

The Canadian General Standards Board (CGSB) is responsible for the development of voluntary consensus standards that are widely used by all levels of government, industry and consumers. It is accredited by the Standards Council of Canada to develop national standards. Recently, CGSB has commenced implementation of a national qualification and certification program for products and services.

At the present time, CGSB is active in developing standards on flammability of hospital textiles, humane animal traps, personal flotation devices for children, petroleum products, insulation and insulation installers, pet food and thermography.

The thermography standards work is a good example of how CGSB provides consensus solutions to public and private sector problems. As a result of the energy shortage and the increased use of insulation by home owners, some companies are offering a new service to the public — that of providing a "thermographic scan" of a house to identify areas where heat is being lost. While the concept is a good one, the equipment, techniques and the personnel are parts of a fledgling industry for which standards of performance are required. Adherence to the CGSB standards would provide a level of assurance to home owners that the thermographic scan is being carried out competently. The Consumers' Association of Canada has expressed the view that home owners should be careful to assess the competence of companies offering such services at the present time.

Trends

Food Additive Survey Results

A survey of 25,000 Canadians has revealed a general lack of knowledge about food additives.

The research was conducted by Health and Welfare Canada and reveals that most people are confused about what food additives are and to what degree they are permitted in foods. Ninety-one per cent of the respondents said they need to know more.

The department will consider the findings when reviewing food policy and when revising public education programs. This year, food additive workshops are being conducted for health professionals, and information booths will be set up in shopping malls in five regions of the country.

The findings are also being discussed with other government agencies, food manufacturers, health professionals, and consumer organizations. Representatives of the food industry, after reviewing the survey results, have agreed to work towards better public understanding of the necessity for food additives in modern food processing. Through joint action it is hoped that communication with consumers can be improved in order to alleviate their expressed concerns.

Nutrition Canada Report on Anthropometry

Data on the height, weight and body dimensions of Canadians, based on the Nutrition Canada National Survey conducted between 1970 and 1972, is now available. The report was prepared for Health and Welfare Canada by the noted Canadian expert on growth and development, Dr. Arto Demirjian who is Director of the Growth Research Centre at the University of Montreal. This is the first time in over 20 years that data on the height, weight and body dimensions of Canadians have been available on a nationwide basis.

Differences in height and weight were noted among the three population groups (national, Indian and Inuit) and between different socio-economic groups. For example, Eskimos were shorter and lighter than both the Indian and national populations. In the national group, adults in higher socio-economic groups (households with incomes greater than $6000 in 1970-72) were generally taller than those from lower socio-economic groups (households with incomes less than $6000 in 1970-72). Men in the upper socio-economic group were heavier than men in the lower groups. For women the differences were less clear-cut; however, women over 50 years of age in the lower socio-economic group were much heavier than those in the upper socio-economic group.

The results also showed a definite increase in height measurements for Canadians of all age groups compared with the data available 20 years ago. There was also an increase in body weight but this was not as striking as the change in height.

Comparisons with studies from other countries illustrate important national differences in body measurements. For example, comparisons with American data show that Americans are generally taller and heavier for their age than Canadians. Such findings emphasize the necessity of establishing national standards for each country.

New Products

Soil and Stain Repeller

The DuPont Company has introduced a new family of fabric protectors for the home furnishings industry. Marketed under the name "Teflon," the family of products include "Teflon" NPA, with improved dry soil performance and abrasion resistance for upholstery, nylon, acrylic and polylefin fibers; "Teflon" G, a general finish that is effective on most upholstery, drapery and slipcover fabrics, including those of cotton, linen, wool, rayon, acetate and synthetic fiber; "Teflon" VP for cotton /rayon and velvets; and "Teflon" PE will add a soil release characteristic to treated polyester fabrics, so that stains that become worked into the fibers are more easily removed during cleaning.

"Teflon" will replace the "Zepel" trademark previously found in home furnishings. However, the company will continue to use the name "Zepel" for rain and outerwear under the name "Zepel" rain/stain repeller.

Wallpaper

Two new kinds of wallpaper are on the market. DuPont makes "Flair Squares", foot-wide squares of prepasted wallpaper which comes in 24 designs, and sells for about 10% more than regular rolls. Another innovation is "Paris Wall", a thick sandwich of vinyl surface, foam core and glass-fiber backing, to be applied over rough surfaces. It is sold in rolls at about four times the price of regular wallpaper, and can cover such uneven surfaces as ceramic tile, cracked plaster and concrete blocks.

Ultrasonic Cleaner

Matsushita Electric of Japan will market a new type of washing device in Canada by the end of 1980. The "Ultrasonic Cleaner" employs high-frequency sound to remove dirt particles. Articles to be cleaned are soaked in a large bowl on top of the machine, then exposed to sound waves for 10 minutes. The manufacturer recommends the cleaner especially for jewels, eyeglasses, and false teeth. It will cost about $100 in Canada.

Talking Products

Several consumer products now can "talk" to their users through computerized voice synthesis. For instance, some Datsun cars can tell their drivers to turn off the car lights or remind them of the speed limit; some new alarm clocks announce that it is time to wake up; Quasar builds a microwave oven which will tell you when your roast is done; while Sharp Electronics makes a talking calculator. As well, some manufacturers are working on televisions that will turn on and off in response to a voice command.

Gas Microwave Oven?

Sanyo has the answer for consumers who prefer cooking with gas. They recently introduced a Combination Gas Convection/Microwave oven all in a compact countertop unit. It comes in two versions, model GMO 801 for use with natural gas, and model GMO 800 for use with liquid propane.

This versatile oven cooks with either microwave or gas convection heat or in combination. There is also a fourth option of cooking, using convection first, followed by microwave. The oven has a 45-minute gas convection timer and a 20-minute microwave timer. The microwave power output is 500 watts and the convection heat has a temperature range from 95°F to 450°F. The suggested retail price is $869.95.

Product Safety

Bicycles

Only in Manitoba are the new Canadian Standards Association (CSA) standards on bicycles mandatory; in other provinces, bicycle manufacturers may meet the standards voluntarily. To date, six manufacturers have applied for CSA approval — Universal Bicycle, Victoria Precision Works, Beekay, CCM, Procycle and Raleigh. Among the prohibited parts on the safer bicycles are banana seats and extra-high handlebars.

Aerosol Sprays

Aerosol sprays sold in Canada rarely use fluorocarbon propellants now, due to their demonstrated effect of damaging the earth's ozone layer. Fluorocarbon propellants have been banned from spray cans for personal use — hair sprays, deodorants, and anti-perspirants — since June 1, 1980. The replacement propellants used are hydrocarbons, which are lighter in weight; hence, a noticeable reduction will be made in size of spray cans. But hydrocarbons also are harmful because of their flammability. Therefore the new spray cans will contain warnings that the propellants can be set on fire.

The New Wave in Beds*

We're light years behind the ancient Persians and Egyptians. They knew the pleasure of weightless slumber over 3,000 years ago, when they filled goatskins with water and created the world's first waterbeds. The modern floating mattress has improved greatly since its rebirth in the 1960's, but many people are still at sea with the idea of liquid sleep.

A Brief History

Waterbeds are no novelty; they have been used by the medical profession for some time, for treatment of bed sores, for burn victims, in maternity wards, and in neo natal units for premature babies. In fact, advertisements for a water mattress to be used in treating bed sores can be traced back to 1854.

Waterbeds floated into the commercial market in the late 1960's, with the advent of the hippie generation. The first waterbeds were often made of cheap plastic and were sold without a frame or a heater. These unsupported mattresses usually lasted only a few months, before rupturing under the strain, and waterbeds quickly gained a poor reputation. But the waterbed bubble did not burst, and major quality improvements during the last five years has brought on a tide of new sales. In Edmonton alone, the number of waterbed retailers has risen to almost 20 today from only 4 in 1977.

Waterbed Components

The basic idea behind a waterbed is that you sleep better if your weight is supported evenly. The water mattress will conform to your body's contours, greatly reducing pressure on your heels, hips, and shoulders. It is this pressure that cuts off circulation, causes discomfort and results in tossing and turning during sleep.

Waterbeds have more components than an ordinary bed, the main parts being the water mattress, safety liner, frame, heater, decking, and pedestal.

Mattress — The waterbed mattress is actually a large bag or bladder, and should be made of a least 20 mm thick polyvinyl chloride (PVC). The mattress can be sealed by using either a lap seam (like a blue jean seam), or a butt seam (sealed edge to edge). A lap seam is both more difficult to make and more expensive, but it is much stronger than a butt seam. The seams are welded together by a high frequency electrical current which rearranges the molecular structure of the vinyl.

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*SOURCE: Market Spotlight. Alberta Consumer and Corporate Affairs. June 1980.

Some water mattresses are "waveless". They contain baffles, coils, or cylinders to reduce water movement by breaking up the waves. This gives the mattress a firmer feel.

Liner — The safety liner is essential and is placed underneath the mattress and tacked to the edge of the frame. Its function is to catch any water that may seep out of the mattress when it is being filled, or if the bag is punctured.

Frame — The frame is usually the most expensive part of the unit and performs the important function of taking the pressure off the mattress seams, and supporting the safety liner. The frame should be made of wood, such as pine, oak, or mahogany, and should be at least 1½ inches thick. Be wary of fir and spruce frames as they may warp and may not have adequate strength to support the mattress.

Heater — A heater, which operates much like an ordinary heating pad, is a vital part of the waterbed. An unheated mattress feels cool and clammy against your skin, and drains your body of heat. The heating unit is placed under the safety liner and the temperature is regulated by adjusting a thermostat. The water is heated or cooled at a rate of 10°F per hour, meaning that it takes about two days to heat a mattress to a comfortable temperature.

Heating a king size waterbed to 84°-87°F would use approximately 115 killowatt-hours of electricity a month. Depending on local utility rates this could increase your monthly power bill by $3 to $5.00. Keeping the bed made at all times will prevent heat loss.

Decking & Pedestal — The decking rests on top of the pedestal and supports the mattress and frame. Plywood decking is usually used because it is stronger than other materials such as particle board.

Most waterbeds are sold with a pedestal. It can be described as a four-sided box that is narrower and about 12 inches shorter than the frame. A pedestal has at least two functions; raising the bed to a comfortable height and distributing the weight of the bed evenly.

Waterbed Sizes

Most waterbeds are 84 inches long, and come in various widths from twin to king size. An eight-foot round bed is also available. Then, there are waterbed cribs for about $600; they include such safety features as a buzzer that sounds in case of heater failure. Some stores even have waterbeds for pets!

Waterbeds may hold up to 170 gallons of water, depending on the size and firmness of the bed. Including the frame, a waterbed may weigh up to 1,700 pounds, or 45 pounds per square foot. Because the weight of a waterbed is distributed over thirty square feet or more, it is said to be no heavier per square foot than a well stocked refrigerator. Independent engineering studies have concluded that homes built in accordance with today's building standards can easily withstand the weight of a waterbed.

Warranties

Warranties vary between various retailers; most offer the manufacturer's four to five year unconditional warranty on the heater and mattress, and some retailers extend the warranty for another five to ten years, on a pro rated basis. Most waterbed retailers offer plans allowing dissatisfied customers to return the bed for a full or partial refund.

Prices

The prices of waterbeds can range from $300 to $2500. The least expensive waterbeds come with an unfinished frame that is put together by the consumer, while higher priced models include a more elaborate frame. Most retailers charge $40 — $45 for delivery and installation. Custom sheets for waterbeds can range from $50 — $90. Conventional fitted sheets may not fit a waterbed, as it is usually 84 inches long, compared to 80 inches, the usual length of a conventional queen or king size bed. A mattress pad prevents the clammy feeling a vinyl mattress can give, and costs about $20 — $25. A patch kit may be a good investment, and costs a couple of dollars.

Hybrids

A variation of the waterbed, called a hybrid or "Flotation Bed", is made to look much like a conventional mattress. The bag that contains the water is covered by a foam shell.

The shell and bag are encased in a safety liner and covered by a quilted coverlet. This portion of the bed rests on a box-like foundation that takes the place of a conventional box spring, and the entire bed sits on a metal frame or a pedestal.

A specially designed heater sits between the mattress and foundation. The heater is necessary to reduce the possiblity of problems with condensation, odor, and mildew.

Hybrids are the same length as a conventional bed, therefore regular fitted sheets can be used. Because hybrids use less water, they are much lighter than waterbeds. They also may be more expensive, ranging in price from $600 to $1,100 or more.

Buying a waterbed is very much a matter of individual choice. Only you can decide whether the idea holds water.

METRIC ORDER FORM

	Cost	Quantity	Total
STYLE GUIDE FOR METRIC RECIPES	No charge	_____	_____
SI and Home Economics — A METRIC STUDY GUIDE	$10.00	_____	_____
METRIC GUIDE FOR COOKWARE AND BAKEWARE (10 copies $15.00) or	$2.00 ea.	_____	_____
CLOTHING AND TEXTILE METRIC CONVERSION (Section from OEA Newsletter — 50 page)	$3.50	_____	_____
REPRINT OF BCHEA METRIC SEMINAR TALKS PLUS RESOURCE LIST — 30 page	$2.50	_____	_____
TOTAL AMOUNT			_____

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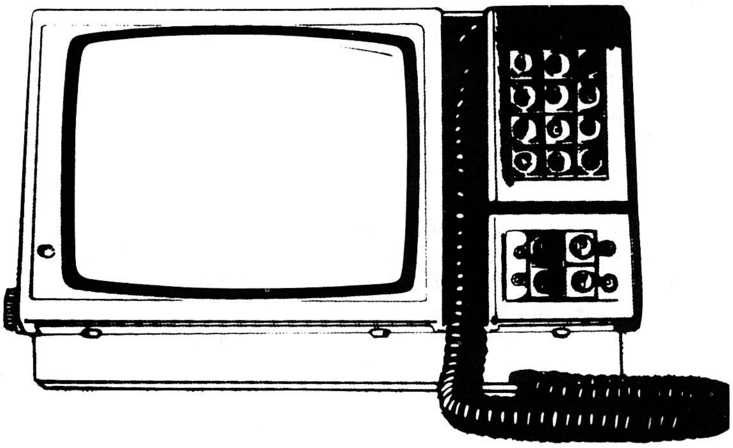
TECHNOLOGY

PAST PRESENT FUTURE

Over 369 attended the 1980 Canadian Home Economics Conference in Saskatoon. In addition to the Board meetings held before and after the conference, special interest groups took advantage of the conference to arrange sessions before the conference began. Others made their way through Saskatchewan on specially arranged tours.

The conference committee and their convener, Leslie Henry, provided many opportunities for delegates to hear varied interpretations of technology and its implications. This was accomplished through concurrent sessions on computer programming in dietetics, the use of commercial TV advertising to promote good nutrition, energy conservation in housing, the wired home and the information society, and the effect of technology on the clothing trade. In addition twenty-one research reports were given. Abstracts were made available at the conference.



Highlights From the Keynote Address: Technology — A Definition

Robert M. Moncur, Deputy Minister of Mineral Resources, Government of Saskatchewan, was the keynote speaker for the conference. He emphasized the importance of understanding the arguments which relate to the definition of technology and the issues that confront it. "Technology is not science", he pointed out. "Science is about understanding nature, while technology involves the manipulation of nature." "Technology", said Moncur, "can be the application of science, but it can also occur in spite of a complete lack of understanding of the principles involved. Technology includes not only tools and machines, but also the systematic organization of labour and innovative practices which help man gain some control over nature."

Some of the Issues

What of the issues associated with technology? Moncur addressed the issue of whether technology is good or bad. He viewed technology as a tool which amplifies actions. He did not accept the idea of calling for a moratorium on the development of technology because some in society may use it for evil. Why?

> First of all, because one scientist or engineer in every four around the world has been busy for years working on military-related R &D, we already have more than enough technological amplifiers available to do us all in several times over. So any new technology probably won't make matters any worse. The second reason he didn't accept this argument is because anyone trying to use technology to amplify their malevolent intentions is not going to be dissuaded by an appeal to their better nature.

A trickier question, according to Moncur, is how to deal with the unintentional bad effects of technology.

> If ecologists are the pessimists, economists are clearly the optimists about technology. I don't know where home economists come down, but economists in general are accused . . . of viewing technology as a more important factor than either labour or capital in affecting economic growth and social progress. Ironically, the purveyors of technology — engineers and natural scientists — seem to be sitting on the fence. What these different attitudes suggest is that the issue of whether technology represents hope or catastrophe has more to do with who's viewing technology than it has to do with technology itself.

A second issue is the limits-to-growth vs. the growth-of-limits. "Systems analysis types have been described", says Moncur, "as the second most pessimistic about technology after ecologists." Both take a holistic view of the world. Complex computer programs have been developed for the Club of Rome to model the world resource situation. The conclusion is that the growth of consumption must stop. However, there are critics who say the problem is too large for the inadequate modelling capabilities of any computer program so systems critics don't give much credence to the conclusions drawn by systems analysts. Other critics like Chauncey Starr in *Science, Technology and the Human Prospect* sees that "a long future of expanding expectations continues to be available to us if we regard technology as an unlimited resource of the human mind." As an example, it was pointed out that:

> Oil exploration and recovery techniques at the turn of the century consisted of looking for signs of seepage at the surface and drilling around salt springs. Had these techniques not changed, we would have used up our reserves long ago.

As part of the keynote address, Moncur introduced the idea that there really is no demand for energy. What people want is some more readily identifiable service — what we want are *energy services.*

> When people talk about managing energy demand, or energy conservation if you will, they sometimes confuse two very different aspects of conservation. I think the concept of energy services will help to clarify this difference.
>
> For instance, two common bits of advice to any homeowner about energy conservation are: turn down your thermostat, and add insulation. Philosophically, these two suggestions are worlds apart.
>
> In one case — turning down your thermostat — you are altering the level of service demanded. Let us call such an initiative a lifestyle change. While innocuous examples, like turning down the thermostat a little, are no problem, in general, lifestyle changes are a very touchy issue.

He suggested that technologies such as solar heating which will allow us to have the same service with less energy are to be pursued. This "saved" or "conservation energy" is pollution and tax free, a concept that is often overlooked.

Moncur made reference to current articles like Chauncey Starr's "The Growth of Limits" in *Science, Technology and the Human Prospect* and Harvey Brooks', "Technology: Hope or Catastrophe" in *Technology and Society,* 1(1): 3-17, 1979.

Roles for Home Economists

Home economists were reminded that they are in a position to evaluate the energy services demanded in the home, to assess the *technical fixes* that come along to help provide those services more efficiently and to "consider new technologies which may redefine the role of the home in society."

> Technology, by any definition, will play a major role in reshaping the home environment. And energy technology will be a key element in that restructuring. And you will most certainly be looked to for advice and leadership in this "attempt to satisfy man's wants by human action on physical objects." (Kranzberg & Pursell, *Technology in Western Civilization*)

Overall Impressions

One left the conference feeling hopeful in being able to cope and use technology to advantage, and with a sense of the professional need to understand the capabilities of the new technology and to make it work in providing service to families. We also came away with Ethel Marliss' words ringing in our ears — "Don't talk to yourselves."

She reminded us that technology generates jargon; professionals tend to get wordy; and that if no one understands us or if it takes too long to get the message across, we aren't much help to families. Thanks Ethel, we'll work on it.

1980 CHEA Conference Committee

The CHEA Conference '80 Committee was responsible for a successful conference.

Front row from left: Marie Dunn, Publicity; Nancy Fischer, Annual Meeting; Pat Verbeke, Administration; Leslie Henry, Co-convenor. Back row from left: Jean Sisson, Treasurer; Joan Finlayson, Co-convenor; Dianne Johns, Hospitality; Betty Burwell, Registration; Rose Fedorak, Program; Karen Webster, Exhibits. Missing: Betty Ann Deobald, Special Groups; and Merry Beazely, Tours/Special Events.

It is with both a sense of sadness as well as relief that the CHEA Conference came to a close in Saskatoon on July 17, 1980. The relief probably needs no explanation.

The sense of sadness arises from the ending of an event that we believe had a very positive effect for a variety of groups.

We do hope that the delegates were able to take home a feeling for what technology holds in store for them in both their professional as well as personal lives.

Closer to home I saw a group of individuals, members of the core committee, gradually meld together into a tight working group — one I was privileged to be a part of and one to be congratulated for their dedication and hard work.

Leslie Henry

Letters

Baby Food

Editor's Note: The "Infant and Child Feeding Position Paper" was published in the Fall 1979 issue of CHEJ (Vol. 29, No. 4, p. 199). A response by R. Aust (H. J. Heinz Company of Canada) was published in the Spring 1980 issue (Vol. 30, No. 2, p. 140). The two letters which follow are in response to Aust and make reference to the "Infant and Child Feeding Position Paper" which was published last fall. Readers interested in this topic will also want to refer to a letter by M.G. Wood in the Summer 1980 issue of CHEJ (Vol. 30, No. 3, p. 198).

* * * * *

The Canadian Home Economics Association is deeply concerned to promote improved infant and young child nutrition, not only through support to Canadian families but families in those countries trading and receiving food aid from Canada. The position paper on Infant and Child Feeding was developed and published to strengthen our activities to meet this objective. All home economists need to be aware of the gaps in marketing procedures that hinder the basic health and well being of our children. It seems essential to have some agreement with industry to develop a monitoring system appropriate to this issue. We have asked Alice Jenner to open this dialogue pointing out some of the loopholes in the Heinz letter published in the Spring issue of the *CHEA Journal* that are deterimental to the development of marketing practices of social benefit.

Let's use the letters section to address this issue, tell us what action you are taking to support the recommendations and initiatives proposed in the CHEA position paper on infant and child feeding.

We need to evoke a system of education and marketing that meets health and social needs in Canada and in those countries where we trade and send food aid.

Jean Steckle, Chairman
International Development Committee
Canadian Home Economics Association

* * * * *

In the letter Aust states "As manufacturers in Canada have demonstrated a responsible position . . . there is no need for government monitoring as recommended by CHEA." The letter makes no mention of marketing practices detrimental to the health and well-being of children in the developing countries. The letter says that the position taken by CHEA on this issue is contrary to that of the Centre for Science in the Public Interest which recently stated "our studies of the baby food industry have led to improvement in the quality of baby foods." I interpret that statement as saying there was need for improvement and that watchful action of a concerned citizen's group brought it about.

For the record, the position of the Centre for Science in the Public Interest on this matter is clearly stated in the introduction to its white paper on "Infant Feeding Practices" as follows:

> As the production of infant foods has shifted to the factory, parents have received less and less encouragement to choose non-commercial alternatives. The government has not regulated the advertising of formula and baby food, nor promoted breastfeeding and home-preparation of infant foods to counter commercial messages. Similarly, health professionals, whose thinking has been shaped by the social mores and commercial pressures of the time, have done little to promote feeding practices that are most beneficial to the infant. Time is ripe for enlightened change in government, corporate, and professional policies related to infant feeding. (Citizens Committee on Infant Nutrition, 1974)

It is heartening to note that there are companies in the food and allied industries working with authorities in pediatrics, nutrition and public health to examine current practices and problems in infant feeding in developing and in industrialized nations, seeking guidelines for improving feeding practices and identifying research needs. The Nutrition Foundation (New York) created and supported by leading companies in the food industries is an excellent example of this. It is a public, non-profit institution dedicated to the advancement of nutrition knowledge, and its effective application in improving the health and welfare of mankind. The Nutrition Foundation convened an International Advisory Committee on Infant and Child Feeding to provide consultation and guidance in conjunction with its stated objectives. The international groups composed of leading authorities in pediatrics, nutrition and public health released their report, *The Feeding of the Very Young: An Approach to Determination of Policies;* in October, 1978. This is what the report says about the effects of promotion and distribution of milk formulas on the attitudes of women toward infant feeding.

> Today there are many assumptions about this issue but there is relatively little systematic documentation of its influence on the choice made by mothers. Consideration should be given to the marketing practices of infant food distributors and the extent to which these are consistent with enlightened medical opinion and, conversely, the extent to which medical services attempt to ensure that commercial organizations locally act responsibly in promoting the health of the consumer. (The Feeding of the Very Young, 1978)

This report recommends that women in industrialized countries be given objective information on both breast and bottle feeding upon which to reach their decisions and that "all mothers be educated and guided fully concerning supplementary feeding as infants develop."

But what about women in developing countries? The report says — "In most cases, rural women in developing countries are totally dependent on breastfeeding to nourish their infants. When lactation fails their infants sicken and die — women who move from rural areas to urban areas in developing countries tend to reduce or eliminate breastfeeding in favor of artificial feeding under circumstances unfavorable to such a change." Michele Landsberg's Column, *The Toronto Star*, August 28, 1979, pretty well says it all:

> Picture the young, illiterate mother in teeming Singapore or rural Nigeria. She knows it will take her best efforts to keep her new baby alive. Above her bed in the maternity ward is a glossy poster of a fat baby, chuckling with its baby bottle and a tin of powdered formula.

> Before the mother even begins to breast-feed her new baby, she is visited by a "milk nurse" dressed in crisp, authoritative whites. The "nurse" is an employee of the baby formula company, and she leaves a sample tin with the mother. Ah, the magic promise of this western elixir.
>
> Back the mother goes to the village, where the stream that is the village water supply is also the village sewer. There is no fridge, and no way to sterilize the bottle. And there is no money; it would take 75 per cent of the family's income to keep on buying formula.
>
> So she dilutes it more and more, stretching the powder with dirty river water. One tin, meant to last three days, lasts three weeks. When even that is gone she uses tea instead. She has no choice because her own breast milk dried up weeks ago.
>
> The baby cries, he has diarrhea and begins to vomit. His belly is a swollen drum and his bones are etched sharply under his taut skin.
>
> Then he dies, and is one of the 10 million Third World babies who, according to medical experts, succumb every year to "baby bottle disease." If he had lived, he would have been retarded from infant malnutrition.

It appears that there are still marketing procedures very detrimental to social benefits. There is need for a monitoring system appropriate to the issue.

Alice Jenner

Citizens Committee on Infant Nutrition. White paper on "Infant Feeding Practices." Washington, D.C., Centre for Science in the Public Interest, Dec., 1974.

The Feeding of the Very Young: An Approach to Determination of Policies. A Report of the International Advisory Group On Infant and Child Feeding to the Nutrition Foundation. October, 1978.

* * * * *

Congratulations on your comprehensive position paper on Infant and Child Feeding (Fall 1979). We at **Infact** are delighted with your stance on this important issue, particularly in that many of your members are influential in the lives of future mothers.

Your readers may be interested to know more about Infact Canada. Our aims are as follows:

- to encourage breast feeding for all, but especially the disadvantaged Canadian and Native peoples;
- to discourage promotion of bottle feeding in Canada, e.g. take-home packs of infant formula from hospitals;
- to halt promotion of infant formula in the Third World (where its safe use is virtually impossible), primarily by pressuring the infant formula industry and specifically with boycott action against the Nestlé Company;
- to work with and support the World Health Organization (WHO) in developing an adequate marketing code to govern distribution of infant formula.

There is enormous counter-pressure from the formula industry and more and more violations of the basic WHO recommendations are being reported. In view of the continuing negotiations between WHO, Infact and formula manufacturers, it is essential to increase boycott pressures. It is only in this way that we can hope for a binding Code of Ethics and an effective institutionalized monitoring system.

Nestlé controls the largest share of the market in the Third World and, being Swiss based, can only be pressured by boycott action in North America. Please consider avoiding the following Nestlé products, available in Canada: Nescafé, Libby, Nestea, Encore, Nestlé's Quik, Taster's Choice, McNeill and Libby, Crosse and Blackwell, Maggi, Decaf, Souptime, Nestlé's Crunch, Beechnut Baby Foods, Kavli Crispbread, Cheeses (Cherry Hill, Old Fort, Swiss Knight, Wispride, Provalone, Lacatelli), L'Oreal, Lancome Cosmetics, Keiller, James Keller and Sons Ltd.

Infact is a non-profit, international organization of nutritionists, educators, churches and concerned citizens. Home economists are encouraged to add their personal and professional support to this group. For further information, explanatory material or newsletters, please write to: Infact Canada, 1611 Quadra Street, Victoria, B.C. V8W 2L5.

J. Anne Carrow
Nutritionist and Home Economist
For Infact Canada

To the members of CHEA:

May I take this opportunity to thank everyone for the telegram I received from the Saskatoon Conference. I would also like to thank Miss Gertrude Gerlach for her article in the Summer issue of the Journal and the Journal committee for publishing it. To the many members from whom I have received letters, notes, cards and telephone calls, my deepest appreciation.

I hope the 1980 meetings and Conference were successful and I will, for sure, continue my interest in CHEA. Again thank you all and best wishes to the members and the Association in all activities of the future.

Jean Bradshaw
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Readership Survey
— CHE Journal, Volume 30

By September 1, 1980, 33 responses were received from the Readership Survey which was enclosed in the Summer 1980 (Vol. 30 No. 3) issue of the *CHE Journal*. As was anticipated, this was fewer than last year. The readers who did respond, however, provided the editors with useful information and the encouragement to continue striving to provide a publication that is interesting as well as helpful to our readers.

Of the 33 responders, 21 indicated they read most or all of the *CHEJ* and 17 of 33 read most or all of the advertising (see Table 1). This compares to 92 of 140 and 81 of 140 respectively in the 1979 Survey (CHE Journal Vol. 29 (4), 219).

There were 96 articles or items listed in response to question #3 which was, "List three articles from the 1980 issues which you considered to be especially interesting or useful to you". The area of interest breakdown of responses was as follows:

Food and Nutrition — 25
Housing — 17
Management — 14
Professional Development — 9
Family Studies — 5
Consumer Studies — 2
Clothing and Textiles — 1
Regular Departments — 23
(What's New, New Publications and Visuals, Book Reviews, Abstracts of Current Literature and Happenings)

Since the last three issues focussed on food and nutrition, housing and management, it is understandable that there were more articles in these areas and hence, more responses.

Of the regular departments mentioned, *What's New* and *New Publications and Visuals* were mentioned 14 out of the 25 times, indicating the continued interest of our readers in keeping up-to-date.

Many good suggestions were received for future articles and themes. They will be considered in future planning.

Ten responders offered to write a book review, two offered to write an article and one to contribute to *What's New*. We appreciate this support and would encourage every member to consider contributing to future issues in some way. Perhaps a letter to the editor would be a good way to start.

The comments, both complimentary and critical, are appreciated by the Journal Committee. Your opinions are important to us. Anyone who still wishes to return the Readership Survey is invited to do so. ●

Table 1. Amount of *CHEJ* normally read

Item	N	very little	about half	most	all
Amount of Journal	33	4	8	18	3
Amount of Advertising	33	7	9	14	3

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- Consumer Economics and Management
- Professional Development
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- Journal (appointed by Journal Committee)

In 1981, for the second time CHEA will be conducting a mail ballot to enable all members to vote.

Members will be advised of the proposed slate by February 16th, 1981. Further nominations will then be accepted until March 31, 1981, after which time the mail ballot will be conducted.

Please submit nominations by February 1, 1981 to:

Gail E. Watson
Chairman, Nominating Committee
3807 Vialoux Drive
Winnipeg, Manitoba R3R 0A5

All nominations must be accompanied by:

- assurance of nominee's CHEA membership (membership number)
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- brief biographical sketch of nominee.

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IV The Membership Directory will be available in November for $5.00 to members (non-commercial use). You may order a copy now. Please enclose $5.00 with your fees payment.

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1. Active membership shall be limited to individuals with the following qualifications whose application is approved by the Board of Directors
   a. a degree in Home Economics from a recognized university, or
   b. a degree in a related field from a recognized university and by interest and activity serves the goals of the Association or,
   c. was a member in good standing of the unincorporated body known as the Canadian Home Economics Association at the time of the incorporation of the Association and who maintains continuous membership in good standing of this Association.
   d. The Board of Directors may grant active membership to one who, after five years of associate membership in the Association, is deemed to have made an active contribution to the Association or the profession.
2. An individual who has had continuous active membership for at least ten years immediately prior to applying for life membership may become a life member subject to the approval of the Board of Directors.
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b. a provincial Home Economics teacher's certificate, or
c. a provincial teacher's certificate with additional training in Home Economics equivalent to at least one year of successful study.

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Student membership shall be granted to a person enrolled in a **full-time** undergraduate program at any Canadian university, faculty, college, school or department which is eligible to send voting delegates to the A.C.H.E.S. convention.

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Reserve membership may be granted on application to the Board of Directors to those who qualify as active or associate members, and who are now
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b. home economists employed on an average of less than 10 hours per week
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Fellowships

The Social Sciences and Humanities Research Council brochure *Grant Programmes* explains how to obtain research support, leave fellowships, conference grants, and funds to present a paper at an international conference. If you have held a full-time faculty appointment at a Canadian university for at least five of the last six years and are a Canadian citizen or landed immigrant, you can apply for a leave fellowship. October 1 is the deadline for application. Doctoral Fellowships and Doctoral Completion Grants for specific areas are also available. Address inquiries to: SSHRC, 255 Albert Street, Box 1610, Ottawa K1P 6G4 (Tel. 613-995-9330).

Home economists tout a developmental, educational, preventive approach to the solution of the nation's social and economic problems, rather than the current government emphasis on crisis intervention and therapeutic applications. Without the research base, however, the development of sound family policy, based on reasonable assumptions, and implemented in a preventive mode, is impossible or improbable.

Kinsey B. Green
AHEA Executive Director
AHEA Action, May 1980

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